

EUROFINS ELECTRICAL TESTING SERVICE (SHENZHEN) CO., LTD.

RADIO TEST - REPORT

Japan Compliance Test Report

Test Report Number: EFGX26050189-IE-01-E07

Test Report No.: EFGX26050189-IE-01-E07

Eurofins Electrical Testing Service (Shenzhen) Co., Ltd.

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1 General Information

1.1 Notes

The results of this test report relate exclusively to the item tested as specified in chapter "Description of test item" and are not transferable to any other test items.

Eurofins Electrical Testing Service (Shenzhen) Co., Ltd. is not responsible for any generalisations and conclusions drawn from this report. Any modification of the test item can lead to invalidity of test results and this test report may therefore be not applicable to the modified test item.

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Operator:

2026-05-26

Bruce Zheng / Project Engineer



Date

Eurofins-Lab.

Name / Title

Signature

Technical responsibility for area of testing:

2026-05-26

Albert Xu / Lab Manager



Date

Eurofins-Lab.

Name / Title

Signature

1.2 Testing laboratory

Eurofins Electrical Testing Service (Shenzhen) Co., Ltd.

1st Floor, Building 2, Chungu, Meisheng Huigu Science and Technology Park, No. 83 Dabao Road, Bao'an District, Shenzhen. P.R.China.

Telephone : +86-755-82911867

Fax : +86-755-82910749

The Laboratory has passed the Accreditation by the American Association for Laboratory Accreditation (A2LA). The Accreditation number is 5376.01.

The Laboratory has been listed by industry Canada to perform electromagnetic emission measurements, The CAB identifier is CN0088.

1.3 Details of approval holder

Name : Shenzhen ImagineVision Technology Limited

Address : 101, Building F5, TCL Science Park, 1001 Zhongshanyuan Road, Shuguang Community, Xili Subdistrict, Nanshan District, Shenzhen, China

Telephone : ./.

Fax : ./.

1.4 Details of Manufacturer

Name : Shenzhen ImagineVision Technology Limited

Address : 101, Building F5, TCL Science Park, 1001 Zhongshanyuan Road, Shuguang Community, Xili Subdistrict, Nanshan District, Shenzhen, China

Telephone : ./.

Fax : ./.

1.5 Application details

Date of receipt of application : 2026-05-12
Date of receipt of test item : 2026-05-12
Date of test : 2026-05-12 to 2026-06-12
Date of issue : 2026-06-12

1.6 Test item

Product type : E2N Mark II
Model name : E1531
Brand : Z CAM
Serial number : ./.
Sample ID : 260512-38-004
Ratings : DC 12V, 5A
PoE: 12V, 5A
LP-E6 Battery: 7.2V
Test voltage : DC 12V

Radio Technical data

Frequency range : W52: 5180-5240MHz
Radio Tech. : 5GHz WLAN
Modulation : OFDM
TX Power Control (TPC) : Not Supported
Antenna type and max gain : External antenna
Antenna gain : 3.45 dBi
Additional information : ./.

The above sample(s) and sample information was/were submitted and identified on behalf of the applicant.
Eurofins assures objectivity and impartiality of the test, and fulfills the obligation of confidentiality for applicant's commercial information and technical documents.

1.7 Standards

Standards	
Article 2 paragraph 1 item (19)-3	Low power data communications system in the 5GHz band
ARIB STD-T71 V7.0	Broadband Mobile Access Communication System (CSMA)

2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed.



or

The deviations as specified were ascertained in the course of the tests performed.



2.2 Test environment

Temperature	: 20	...	25°C
Relative humidity content	: 30	...	60%
Air pressure	: 100	...	101kPa

2.3 Measurement uncertainty

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

System Measurement Uncertainty	
Test Items	Extended Uncertainty
Uncertainty for Conducted RF test	RF Power Conducted: 1.16dB Frequency test involved: 1.05×10 ⁻⁷ or 1%

2.4 Test mode

Frequency band (MHz)		5150~5250	
802.11a / n HT20 / ac VHT 20		802.11n HT40 / ac VHT 40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
36	5180	38	5190
40	5200	46	5230
44	5220	802.11ac VHT80	
48	5240	42	5210

The EUT was set at continuously transmitting and receiving mode(Low channel, mid channel, high channel) during the test.

EUT test voltage requirement:

The RF unit is supplied by DC power. The fluctuation of input voltage to the circuit of RF unit of test equipment is under $\pm 1\%$, when input voltage from DC 12V to the test equipment is fluctuated by $\pm 10\%$, So, the DC 12V is choosed in the test report.

The measurement result of the voltage fluctuation at RF circuit when DC 7.2V $\pm 10\%$.

DC Input	DC 3V
6.48V	3V
7.2V	3V
7.92V	3V

The measurement result of the voltage fluctuation at RF circuit when DC 12V $\pm 10\%$.

DC Input	DC 3V
10.8V	3V
12V	3V
13.2V	3V

2.5 Test equipment utilized

EQUIPMENT ID	EQUIPMENT NAME	MODEL NO.	CAL. DATE	CAL. DUE DATE
23-2-13-12	Signal Analyzer	N9010B-544	2026-03-20	2027-03-20
23-2-13-14	Signal Generator	N5183B-520	2026-03-20	2027-03-20
23-2-10-43	Switch and Control Unit	ERIT-E-JS0806-2	2026-03-20	2027-03-20
23-2-10-44	DC power supply	E3642A	2026-03-20	2027-03-20
23-1-07-001	Digital multimeter	FLUKE-179	2026-03-20	2027-03-20
23-2-10-109	Temperature & Humidity Record	YEM-70AL	2026-03-20	2027-03-20
23-2-10-45	temperature test chamber	SG-80-CC-2	2026-03-20	2027-03-20

Remark:

1. 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.
2. Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No. 51 of 1992).
3. 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).
4. 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.
5. All calibration reports are from CCIC (Shenzhen) Metrology & Testing Service Co., Ltd.

2.6 Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.	S/N
Laptop	LENOVO	TP00096A	PF-1QH0LV

2.7 Test software information:

Test Software Version			
Modulation	Setting TX Power(SISO)	Packet Type	
OFDM	DEF	11a/6M 11n/MCS0 11ac/MCS0	

2.8 Test Environments

Enviroment Parameter	Temperature	Voltage	Relative Humidity
101.7Kpa	26.5℃	12V DC	51.3%

2.9 Test results

☒ 1st test

☐ test after modification

☐ production test

Conformance requirement according to Article 2 paragraph 1 item (19)-3 and ARIB STD-T71 Version 7.0		Result	Test site
Essential parameter	Corresponding technical requirements		
Transmitter requirements	Antenna Power and E.I.R.P	PASS	Site 1
	Antenna Power Tolerance	PASS	Site 1
	Frequency Tolerance	PASS	Site 1
	Occupied Bandwidth	PASS	Site 1
	Transmitter Spurious Emissions	PASS	Site 1
	Adjacent Channel Emitted Power	PASS	Site 1
	Transmission burst length	PASS	Site 1
Receiver requirements	Secondary Radiated Emissions	PASS	Site 1
	Carrier Sensing	PASS	Site 1
	Interference prevention function	PASS	Site 1

NOTE 1: Measurement taken is within the measurement uncertainty of measurement system.

NOTE 2: “*” N/A is an abbreviation for Not Applicable.

NOTE 3: Test method: MIC notification. No.88 of 2004, Annex 45.

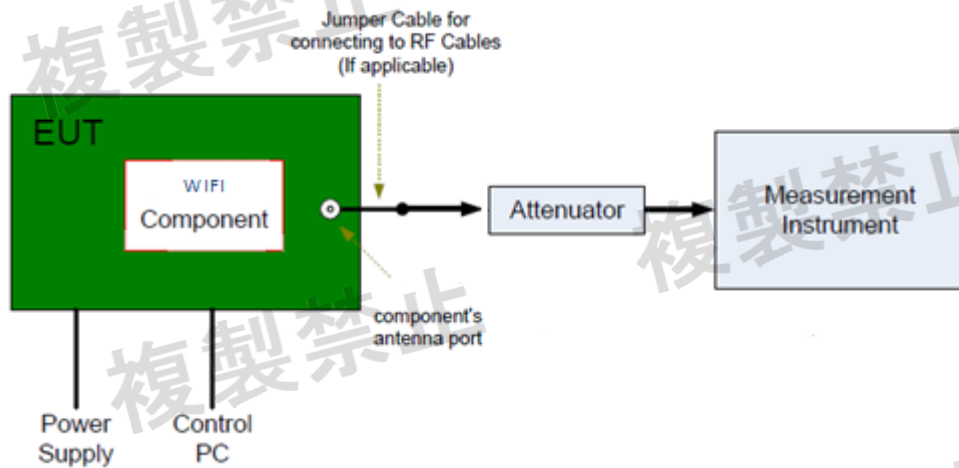
3 Technical Requirement

3.1 Antenna Power , E.I.R.P and Antenna Power Tolerance

3.1.1 Test Method

1. Connect EUT test port to spectrum analyzer.
2. Set the EUT to transmit maximum output power at 5GHz.
3. Then set the EUT to transmit at Highest, Middle, and Lowest frequency and measure the conducted output power separately.
4. RBW=1MHz, VBW:3MHz, Sweep = auto, Detector function = RMS, Trace = max hold
5. Repeat above procedures until all frequencies measured were complete.

3.1.2 Test Setup:



3.1.3 Limit

Limit for Antenna Power ,Output Power Tolerance &EIRP W52 band			
Test Bandwidth(MHz)	Antenna power(mW/MHz)	Antenna Power Tolerance(%)	E.I.R.P(mW/MHz)
20	10	+20 ~ -80	10
40	5	+20 ~ -80	5
80	2.5	+20 ~ -80	2.5
160	1.25	+20 ~ -80	1.25

3.1.4 Test result

Antenna Power							
TestCondition	Test-Mode	Antenna	Freq (MHz)	Result (dBm/MHz)	Result (mW/MHz)	Limit (mW/MHz)	Verdict
NTNV	11A	Ant1	5180	6.14	4.111	≤10	PASS
			5200	5.52	3.565	≤10	PASS
			5240	6.16	4.130	≤10	PASS
	11N20	Ant1	5180	4.23	2.649	≤10	PASS
			5200	4.25	2.661	≤10	PASS
			5240	4.49	2.812	≤10	PASS
	11N40	Ant1	5190	2.61	1.824	≤5	PASS
			5230	2.85	1.928	≤5	PASS
	11AC20	Ant1	5180	4.35	2.723	≤10	PASS
			5200	4.17	2.612	≤10	PASS
			5240	4.36	2.729	≤10	PASS
	11AC40	Ant1	5190	2.52	1.786	≤5	PASS
			5230	2.34	1.714	≤5	PASS
	11AC80	Ant1	5210	0.21	1.050	≤2.5	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Freq (MHz)	Power (mW/MHz)	Rated Power (mW/MHz)	Result (%)	Limit (%)	Verdict
NTNV	11A	Ant1	5180	4.111	10	-58.89	-80 to +20	PASS
			5200	3.565	10	-64.35	-80 to +20	PASS
			5240	4.130	10	-58.7	-80 to +20	PASS
	11N20	Ant1	5180	2.649	10	-73.51	-80 to +20	PASS
			5200	2.661	10	-73.39	-80 to +20	PASS
			5240	2.812	10	-71.88	-80 to +20	PASS
	11N40	Ant1	5190	1.824	5	-63.52	-80 to +20	PASS
			5230	1.928	5	-61.44	-80 to +20	PASS
	11AC20	Ant1	5180	2.723	10	-72.77	-80 to +20	PASS
			5200	2.612	10	-73.88	-80 to +20	PASS
			5240	2.729	10	-72.71	-80 to +20	PASS
	11AC40	Ant1	5190	1.786	5	-64.28	-80 to +20	PASS
			5230	1.714	5	-65.72	-80 to +20	PASS
	11AC80	Ant1	5210	1.050	2.5	-58.00	-80 to +20	PASS

EIRP							
TestCondi- tion	Test- Mode	Antenna	Freq (MHz)	Result (mW/MHz)	EIRP (mW/MHz)	Limit (mW/MHz)	Verdict
NTNV	11A	Ant1	5180	4.111	9.099	≤10	PASS
			5200	3.565	7.889	≤10	PASS
			5240	4.130	9.141	≤10	PASS
	11N20	Ant1	5180	2.649	5.861	≤10	PASS
			5200	2.661	5.888	≤10	PASS
			5240	2.812	6.223	≤10	PASS
	11N40	Ant1	5190	1.824	4.036	≤5	PASS
			5230	1.928	4.266	≤5	PASS
	11AC20	Ant1	5180	2.723	6.026	≤10	PASS
			5200	2.612	5.781	≤10	PASS
			5240	2.729	6.039	≤10	PASS
	11AC40	Ant1	5190	1.786	3.954	≤5	PASS
			5230	1.714	3.793	≤5	PASS
	11AC80	Ant1	5210	1.050	2.323	≤2.5	PASS

The equipment met the requirement of this clause.

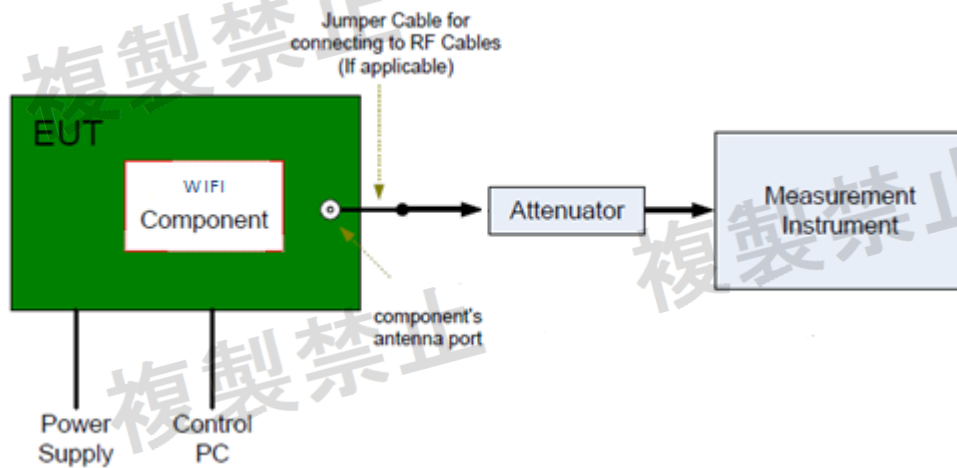
3.2 Frequency Tolerance

3.2.1 Test Method:

1. Connect EUT test port to spectrum analyzer.
2. Set the EUT to transmit maximum output power at 5GHz.
3. Then set the EUT to transmit at Highest, Middle, and Lowest frequency and measure the conducted output power separately.
4. RBW=10KHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
5. Repeat above procedures until all frequencies measured were complete.

3.2.2 Test Setup:

The WIFI component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



3.2.3 Limit (ARIB STD-T71 V7.0)

Tolerance of frequency: $\pm 20 \times 10^{-6}$.

3.2.4 Test Result

TestCondition	Antenna	Freq (MHz)	CenterFreq [MHz]	Result [ppm]	Limit [ppm]	Verdict
NTNV	Ant1	5180	5180.001	0.19305	±20	PASS
		5200	5200.001	0.19231	±20	PASS
		5220	5240.001	0.19084	±20	PASS
		5240	5190	0.00000	±20	PASS
	Ant1	5190	5230.001	0.19121	±20	PASS
		5230	5210	0.00000	±20	PASS
	Ant1	5210	5180.001	0.19305	±20	PASS

Please refer to the appendix A for test plots
The equipment met the requirement of this clause.

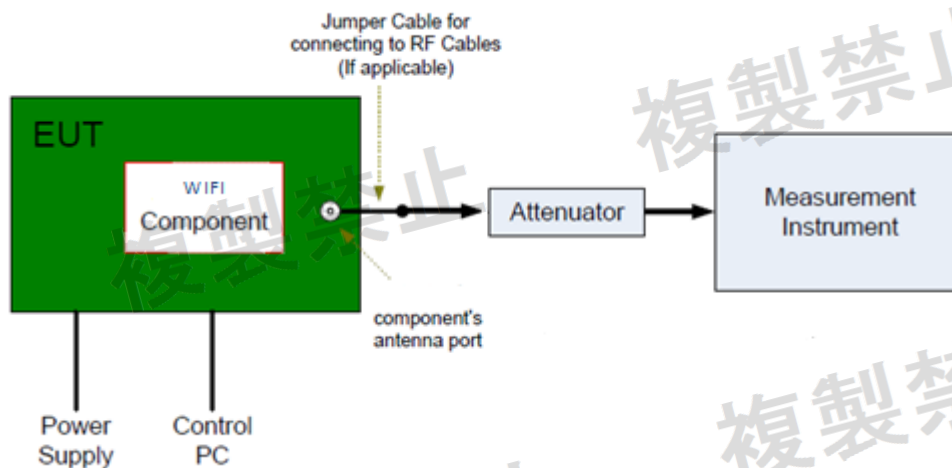
3.3 Occupied Frequency Bandwidth

3.3.1 Test Method:

1. Connect EUT test port to spectrum analyzer.
2. Set the EUT to transmit maximum output power at 5GHz.
3. Then set the EUT to transmit at Highest, Middle, and Lowest frequency separately.
4. Set Occupied bandwidth 99%
5. Set RBW=300KHz , VBW $\geq$ RBW.
6. Set Sweep = auto.
7. Set Detector function = peak.
8. Allow the trace to stabilize.
9. Repeat above procedures until all frequencies measured were complete.

3.3.2 Test Setup:

The WIFI component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



3.3.3 Limit (ARIB STD-T71 V7.0)

20MHz or less for 20MH system
 20~40MHz for 40MHz system
 40~80MHz for 80MHz system

3.3.4 Test Result

TestCondi- tion	Test- Mode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	11A	Ant1	5180	16.419	≤20	PASS
			5200	16.442	≤20	PASS
			5240	16.428	≤20	PASS
	11N20SI SO	Ant1	5180	17.514	≤20	PASS
			5200	17.549	≤20	PASS
			5240	17.496	≤20	PASS
	11N40SI SO	Ant1	5190	35.643	≤40	PASS
			5230	35.615	≤40	PASS
	11AC20S ISO	Ant1	5180	17.563	≤20	PASS
			5200	17.528	≤20	PASS
			5240	17.543	≤20	PASS
	11AC40S ISO	Ant1	5190	35.414	≤40	PASS
			5230	35.575	≤40	PASS
	11AC80S ISO	Ant1	5210	75.523	≤80	PASS

Please refer to the appendix C for test plots
The equipment met the requirement of this clause.

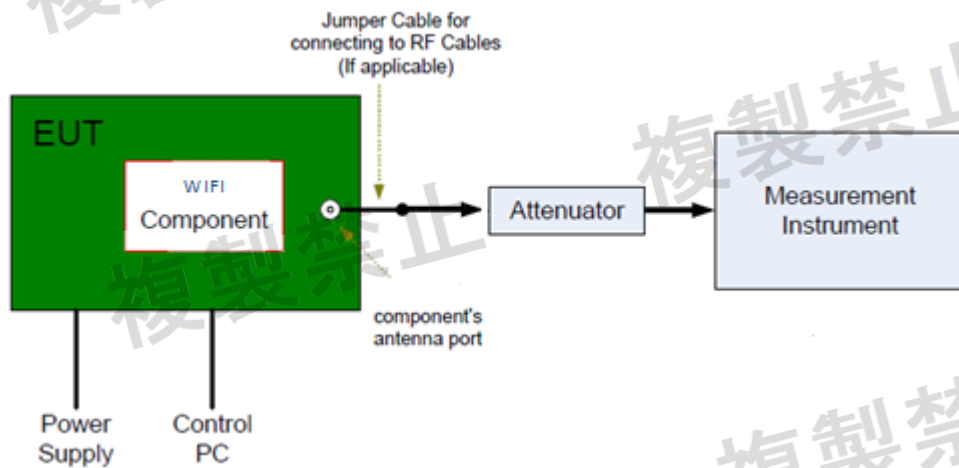
3.4 Transmitter Spurious Emissions (Conducted) (For transmitter)

Test Method:

1. Connect EUT test port to spectrum analyzer.
2. Set the EUT to transmit maximum output power at 5GHz.
3. Then set the EUT to transmit at Highest, Middle, and Lowest frequency separately.
4. Set RBW = 1MHz, VBW ≥ RBW.
5. Set Sweep = auto.
6. Set Detector function = peak.
7. Allow the trace to stabilize.
8. Repeat above procedures until all frequencies measured were complete.

Test Setup:

The WIFI component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



3.4.1 Limit (ARIB STD-T71 V7.0)

W52			
20MHz system		40MHz system	80MHz system
OBW : 18MHz or less	OBW : 18 ~ 20 MHz		
5,142 MHz or less : 2.5 μW/MHz	5,142 MHz or less : 2.5 μW/MHz	5,141.6 MHz or less : 2.5 μW/MHz	5,123.2 MHz or less : 2.5 μW/MHz
5,142 ~ 5,150 MHz : 15 μW/MHz	5,142 ~ 5,150 MHz : 15 μW/MHz	5,141.6 ~ 5,150 MHz : 15 μW/MHz	5,123.2 ~ 5,150 MHz : 15 μW/MHz
5,250 ~ 5,251 MHz : $10^{1-(f-5250)/10}$ mW/MHz	5,250 ~ 5,251 MHz : $10^{1-(f-5250)/10}$ mW/MHz	5,250 ~ 5,251 MHz : $10^{1-(f-5250)/10}$ mW/MHz	5,250 ~ 5,251 MHz : $10^{1-(f-5250)/10}$ mW/MHz
5,251 ~ 5,260 MHz : $10^{1-(f-5250)/10}$ mW/MHz	5,251 ~ 5,260 MHz : $10^{1-(f-5250)/10}$ mW/MHz	5,251 ~ 5,270 MHz : $10^{1-(f-5250)/10}$ mW/MHz	5,251 ~ 5,290 MHz : $10^{1-(f-5250)/10}$ mW/MHz
5,260 ~ 5,266.7 MHz : $10^{1-(f-5260)/10}$ mW/MHz	5,260 ~ 5,266.7 MHz : $10^{1-(f-5260)/10}$ mW/MHz	5,270 ~ 5,278.4 MHz : $10^{1-(f-5260)/10}$ mW/MHz	5,290 ~ 5,296.7 MHz : $10^{1-(f-5260)/10}$ mW/MHz
5,266.7 MHz or more : 2.5 μW/MHz	5,266.7 MHz or more : 2.5 μW/MHz	5,278.4 MHz or more : 2.5 μW/MHz	5,296.7 MHz or more : 2.5 μW/MHz
f = MHz, Difference from 5240 (MHz)	f = MHz, Difference from 5240 (MHz)	f = MHz, Difference from 5230 (MHz)	f = MHz, Difference from 5210 (MHz)
W53			
20MHz system		40MHz system	80MHz system
OBW : 18MHz or less	OBW : 18 ~ 20 MHz		
5,233.3 MHz or less : 2.5 μW/MHz	5,233.3 MHz or less : 2.5 μW/MHz	5,221.6 MHz or less : 2.5 μW/MHz	5,203.3 MHz or less : 2.5 μW/MHz
5,233.3 ~ 5,240 MHz : $10^{1-(f-5233.3)/10}$ mW/MHz	5,233.3 ~ 5,240 MHz : $10^{1-(f-5233.3)/10}$ mW/MHz	5,221.6 ~ 5,230 MHz : $10^{1-(f-5233.3)/10}$ mW/MHz	5,203.3 ~ 5,210 MHz : $10^{1-(f-5233.3)/10}$ mW/MHz
5,240 ~ 5,249 MHz : $10^{1-(f-5240)/10}$ mW/MHz	5,240 ~ 5,249 MHz : $10^{1-(f-5240)/10}$ mW/MHz	5,230 ~ 5,249 MHz : $10^{1-(f-5240)/10}$ mW/MHz	5,210 ~ 5,249 MHz : $10^{1-(f-5240)/10}$ mW/MHz
5,249 ~ 5,250 MHz : $10^{1-(f-5249)/10}$ mW/MHz	5,249 ~ 5,250 MHz : $10^{1-(f-5249)/10}$ mW/MHz	5,249 ~ 5,250 MHz : $10^{1-(f-5249)/10}$ mW/MHz	5,249 ~ 5,250 MHz : $10^{1-(f-5249)/10}$ mW/MHz
5,250 MHz or more : 2.5 μW/MHz	5,249.8 ~ 5,250 MHz : $10^{1-(f-5249.8)/10}$ mW/MHz	5,350 ~ 5,358.4 MHz : 15 μW/MHz	5,350 ~ 5,376.8 MHz : 15 μW/MHz
f = MHz, Difference from 5250 (MHz)	f = MHz, Difference from 5250 (MHz)	f = MHz, Difference from 5270 (MHz)	f = MHz, Difference from 5290 (MHz)
W56			
20MHz system		40MHz system	80MHz system
DSSS, etc.	OFDM		
5,470 MHz or less : 12.5 uW/MHz	5,460 MHz or less : 2.5 uW/MHz	5,460 MHz or less : 12.5 uW/MHz	5,460 MHz or less : 12.5 uW/MHz
5,460 ~ 5,470 MHz : 12.5 uW/MHz	5,460 ~ 5,470 MHz : 12.5 uW/MHz	5,460 ~ 5,470 MHz : 50 uW/MHz	5,460 ~ 5,469.5 MHz : 50 uW/MHz
5,730 MHz or more : 12.5 uW/MHz	5,745 ~ 5,765 MHz : 12.5 uW/MHz	5,770 MHz or more : 12.5 uW/MHz	5,469.5 ~ 5,470 MHz : 51.2 uW/MHz
	Over 5,765 MHz : 2.5 uW/MHz		5,770 MHz or more : 12.5 uW/MHz

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3.4.2 Test Result

TestCondition	Test-Mode	Antenna	Freq(MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Gain [dBi]	EIRP [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	11A	Ant1	5180	30~5142	3765.85	-42.59	3.45	-39.14	0.12190	≤2.5	PASS
				5142~5150	5145.74	-42.65	3.45	-39.20	0.12023	≤15	PASS
				5250~5251	5250.96	-45.17	3.45	-41.72	0.06730	≤109.6	PASS
				5251~5260	5259.67	-46.00	3.45	-42.55	0.05559	≤17.0	PASS
				5260~5266.7	5263.10	-44.75	3.45	-41.30	0.07413	≤15.8	PASS
				5266.7~26000	25062.16	-40.02	3.45	-36.57	0.22029	≤2.5	PASS
			5200	30~5142	3815.44	-42.16	3.45	-38.71	0.13459	≤2.5	PASS
				5142~5150	5145.21	-42.39	3.45	-38.94	0.12764	≤15	PASS
				5250~5251	5250.99	-45.98	3.45	-42.53	0.05585	≤102.3	PASS
				5251~5260	5259.21	-46.03	3.45	-42.58	0.05521	≤18.6	PASS
				5260~5266.7	5265.27	-45.43	3.45	-41.98	0.06339	≤15.7	PASS
				5266.7~26000	25944.02	-40.09	3.45	-36.64	0.21677	≤2.5	PASS
			5240	30~5142	5077.59	-42.59	3.45	-39.14	0.12190	≤2.5	PASS
				5142~5150	5143.32	-43.36	3.45	-39.91	0.10209	≤15	PASS
				5250~5251	5251.00	-20.71	3.45	-17.26	18.79317	≤100.0	PASS
				5251~5260	5251.00	-23.55	3.45	-20.10	9.77237	≤100.0	PASS
				5260~5266.7	5260.44	-44.28	3.45	-40.83	0.08260	≤15.8	PASS
				5266.7~26000	25929.51	-39.69	3.45	-36.24	0.23768	≤2.5	PASS
	11N20SI SO	Ant1	5180	30~5142	3338.49	-42.53	3.45	-39.08	0.12359	≤2.5	PASS
				5142~5150	5148.64	-42.57	3.45	-39.12	0.12246	≤15	PASS
				5250~5251	5250.97	-45.79	3.45	-42.34	0.05834	≤107.2	PASS
				5251~5260	5259.76	-44.60	3.45	-41.15	0.07674	≤16.6	PASS
				5260~5266.7	5260.06	-45.08	3.45	-41.63	0.06871	≤15.8	PASS
				5266.7~26000	25561.15	-40.24	3.45	-36.79	0.20941	≤2.5	PASS
			5200	30~5142	4992.22	-42.08	3.45	-38.63	0.13709	≤2.5	PASS
				5142~5150	5147.30	-42.90	3.45	-39.45	0.11350	≤15	PASS
				5250~5251	5250.85	-44.55	3.45	-41.10	0.07762	≤141.3	PASS
				5251~5260	5259.64	-44.38	3.45	-40.93	0.08072	≤17.1	PASS
				5260~5266.7	5266.19	-44.37	3.45	-40.92	0.08091	≤15.7	PASS
				5266.7~26000	25725.63	-40.13	3.45	-36.68	0.21478	≤2.5	PASS
			5240	30~5142	3849.18	-42.70	3.45	-39.25	0.11885	≤2.5	PASS
				5142~5150	5144.33	-42.76	3.45	-39.31	0.11722	≤15	PASS
				5250~5251	5250.88	-16.24	3.45	-12.79	52.60173	≤131.8	PASS
				5251~5260	5251.38	-22.12	3.45	-18.67	13.58313	≤92.5	PASS
				5260~5266.7	5260.58	-44.10	3.45	-40.65	0.08610	≤15.8	PASS
				5266.7~26000	25134.04	-39.90	3.45	-36.45	0.22646	≤2.5	PASS
	11N40SI SO	Ant1	5190	30~5141.6	3853.48	-41.93	3.45	-38.48	0.14191	≤2.5	PASS
				5141.6~5150	5145.83	-43.20	3.45	-39.75	0.10593	≤15	PASS
				5250~5251	5251.00	-45.24	3.45	-41.79	0.06622	≤50	PASS
				5251~5270	5269.07	-45.87	3.45	-42.42	0.05728	≤8.7	PASS
				5270~5278.4	5278.40	-45.79	3.45	-42.34	0.05834	≤2.5	PASS
				5278.4~26000	24418.94	-39.89	3.45	-36.44	0.22699	≤2.5	PASS
			5230	30~5141.6	3051.47	-42.62	3.45	-39.17	0.12106	≤2.5	PASS
				5141.6~5150	5148.81	-43.55	3.45	-40.10	0.09772	≤15	PASS

				5250~5251	5250.97	-34.28	3.45	-30.83	0.82604	≤53.6	PASS
				5251~5270	5254.55	-35.60	3.45	-32.15	0.60954	≤35.4	PASS
				5270~5278.4	5277.11	-43.91	3.45	-40.46	0.08995	≤3.0	PASS
				5278.4~2600 0	25895.01	-39.34	3.45	-35.89	0.25763	≤2.5	PASS
			5180	30~5142	3912.56	-42.39	3.45	-38.94	0.12764	≤2.5	PASS
				5142~5150	5148.22	-43.72	3.45	-40.27	0.09397	≤15	PASS
				5250~5251	5250.98	-45.24	3.45	-41.79	0.06622	≤104.7	PASS
				5251~5260	5259.60	-45.83	3.45	-42.38	0.05781	≤17.2	PASS
				5260~5266.7	5266.08	-43.93	3.45	-40.48	0.08954	≤15.7	PASS
				5266.7~2600 0	22268.70	-40.11	3.45	-36.66	0.21577	≤2.5	PASS
			5200	30~5142	4960.01	-42.76	3.45	-39.31	0.11722	≤2.5	PASS
				5142~5150	5147.58	-43.21	3.45	-39.76	0.10568	≤15	PASS
				5250~5251	5250.94	-45.09	3.45	-41.64	0.06855	≤114.8	PASS
				5251~5260	5259.15	-45.81	3.45	-42.36	0.05808	≤18.9	PASS
				5260~5266.7	5264.50	-44.57	3.45	-41.12	0.07727	≤15.8	PASS
				5266.7~2600 0	25551.47	-39.62	3.45	-36.17	0.24155	≤2.5	PASS
			5240	30~5142	3775.56	-42.18	3.45	-38.73	0.13397	≤2.5	PASS
				5142~5150	5145.82	-44.02	3.45	-40.57	0.08770	≤15	PASS
				5250~5251	5250.96	-17.94	3.45	-14.49	35.5631 3	≤109.6	PASS
				5251~5260	5251.13	-21.04	3.45	-17.59	17.4180 7	≤97.4	PASS
				5260~5266.7	5260.19	-43.80	3.45	-40.35	0.09226	≤15.8	PASS
				5266.7~2600 0	25908.77	-40.75	3.45	-37.30	0.18621	≤2.5	PASS
		11AC40S ISO	5190	30~5141.6	3732.84	-42.06	3.45	-38.61	0.13772	≤2.5	PASS
				5141.6~5150	5145.68	-43.80	3.45	-40.35	0.09226	≤15	PASS
				5250~5251	5250.92	-45.05	3.45	-41.60	0.06918	≤60.1	PASS
				5251~5270	5268.65	-46.02	3.45	-42.57	0.05534	≤9.0	PASS
				5270~5278.4	5278.18	-45.48	3.45	-42.03	0.06266	≤2.6	PASS
				5278.4~2600 0	25665.69	-39.58	3.45	-36.13	0.24378	≤2.5	PASS
			5230	30~5141.6	5140.58	-41.46	3.45	-38.01	0.15812	≤2.5	PASS
				5141.6~5150	5143.82	-42.43	3.45	-38.98	0.12647	≤15	PASS
				5250~5251	5250.97	-35.52	3.45	-32.07	0.62087	≤53.6	PASS
				5251~5270	5257.54	-37.07	3.45	-33.62	0.43451	≤26.5	PASS
				5270~5278.4	5275.60	-43.97	3.45	-40.52	0.08872	≤3.7	PASS
				5278.4~2600 0	25861.86	-40.13	3.45	-36.68	0.21478	≤2.5	PASS
	11AC80S ISO	Ant1	5210	30~5123.2	5117.60	-32.62	3.45	-29.17	1.21060	≤2.5	PASS
				5132.5~5150	5139.03	-30.13	3.45	-26.68	2.14783	≤15	PASS
				5250~5251	5251.00	-27.19	3.45	-23.74	4.22669	≤25.0	PASS
				5251~5290	5286.69	-32.42	3.45	-28.97	1.26765	≤4.6	PASS
				5290~5296.7	5296.55	-34.30	3.45	-30.85	0.82224	≤2.5	PASS
				5296.7~2600 0	5316.02	-35.87	3.45	-32.42	0.57280	≤2.5	PASS

Please refer to the appendix D for test plots
The equipment met the requirement of this clause.

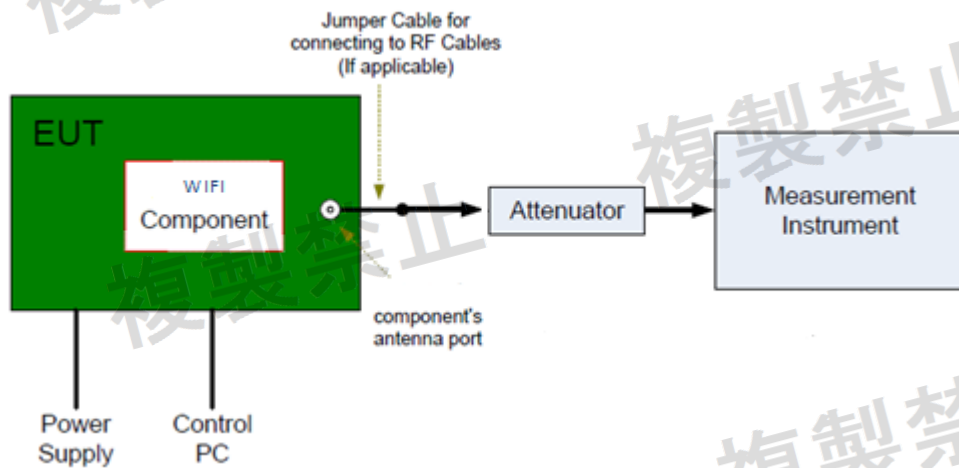
3.5 Adjacent Channel Power Tolerance

Test Method:

1. Connect EUT test port to spectrum analyzer.
2. Set the EUT to transmit maximum output power at 5GHz.
3. Then set the EUT to transmit at Highest, Middle, and Lowest frequency separately.
4. Set RBW :300KHz, VBW :300KHz
5. Set Sweep = auto.
6. Set Detector function = peak.
7. Allow the trace to stabilize.
8. Repeat above procedures until all frequencies measured were complete.

Test Setup:

The WIFI component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



3.5.1 Limit (ARIB STD-T71 V7.0)

For 20MHz BW (All Bands) $\geq 25\text{dB}$ for $\pm 20\text{MHz}$; $\geq 40\text{dB}$ for $\pm 40\text{MHz}$

For 40MHz BW (All Bands) $\geq 25\text{dB}$ for $\pm 40\text{MHz}$; $\geq 40\text{dB}$ for $\pm 80\text{MHz}$

For 80MHz BW (All Bands) $\geq 25\text{dB}$ for $\pm 80\text{MHz}$ BW

3.5.2 Test Result

TestCondi- tion	Test- Mode	Antenna	Freq(M Hz)	Offset [MHz]	Result [dBc]	Limit [dBc]	Ver- dict
NTNV	11A	Ant1	5180	-40	-45.88	≤-40	PASS
				-20	-36.69	≤-25	PASS
				+20	-36.04	≤-25	PASS
				+40	-46.87	≤-40	PASS
			5200	-40	-46.09	≤-40	PASS
				-20	-36.45	≤-25	PASS
				+20	-36.47	≤-25	PASS
				+40	-47.37	≤-40	PASS
			5240	-40	-46.56	≤-40	PASS
				-20	-36.54	≤-25	PASS
				+20	-35.94	≤-25	PASS
				+40	-47.71	≤-40	PASS
	11N20SI SO	Ant1	5180	-40	-45.60	≤-40	PASS
				-20	-34.56	≤-25	PASS
				+20	-34.01	≤-25	PASS
				+40	-46.87	≤-40	PASS
			5200	-40	-45.78	≤-40	PASS
				-20	-33.61	≤-25	PASS
				+20	-34.20	≤-25	PASS
				+40	-46.94	≤-40	PASS
			5240	-40	-46.16	≤-40	PASS
				-20	-34.09	≤-25	PASS
				+20	-34.08	≤-25	PASS
				+40	-47.47	≤-40	PASS
	11N40SI SO	Ant1	5190	-80	-44.01	≤-40	PASS
				-40	-31.25	≤-25	PASS
				+40	-31.60	≤-25	PASS
				+80	-46.03	≤-40	PASS
			5230	-80	-43.39	≤-40	PASS
				-40	-41.87	≤-25	PASS
				+40	-42.23	≤-25	PASS
				+80	-45.35	≤-40	PASS
	11AC20S ISO	Ant1	5180	-40	-45.71	≤-40	PASS
				-20	-33.91	≤-25	PASS
				+20	-34.30	≤-25	PASS
				+40	-46.73	≤-40	PASS
			5200	-40	-46.03	≤-40	PASS
				-20	-34.02	≤-25	PASS
				+20	-34.02	≤-25	PASS
				+40	-47.16	≤-40	PASS
			5240	-40	-46.48	≤-40	PASS
				-20	-34.22	≤-25	PASS
				+20	-34.40	≤-25	PASS
				+40	-47.64	≤-40	PASS
	11AC40S ISO	Ant1	5190	-80	-43.36	≤-40	PASS
				-40	-42.05	≤-25	PASS
				+40	-42.35	≤-25	PASS
				+80	-45.47	≤-40	PASS
			5230	-80	-43.18	≤-40	PASS
				-40	-41.54	≤-25	PASS
				+40	-41.88	≤-25	PASS
				+80	-45.31	≤-40	PASS
	11AC80S ISO	Ant1	5210	-80	-25.25	≤-25	PASS
				+80	-27.22	≤-25	PASS

Please refer to the appendix H for test plots
The equipment met the requirement of this clause.

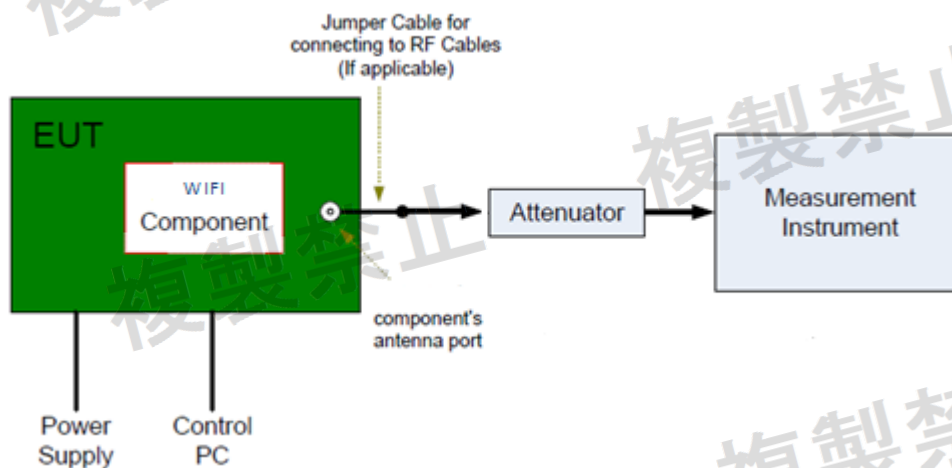
3.6 Burst Length

Test Method:

9. Connect EUT test port to spectrum analyzer.
10. Set the EUT to transmit maximum output power at 5GHz.
11. Then set the EUT to transmit at Highest, Middle, and Lowest frequency separately.
12. Set RBW :8MHz, VBW :50MHz
13. Set Sweep = auto.
14. Set Detector function = peak.
15. Allow the trace to stabilize.
16. Repeat above procedures until all frequencies measured were complete.

Test Setup:

The WIFI component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



3.6.1 Limit (ARIB STD-T71 V7.0)

8ms or less

3.6.2 Test Result

TestCondition	Test-Mode	Antenna	Freq(MHz)	Result [ms]	Limit [ms]	Verdict
NTNV	11A	Ant1	5180	2.02	≤8	PASS
			5200	2.02	≤8	PASS
			5240	2.02	≤8	PASS
	11N20SI SO	Ant1	5180	1.89	≤8	PASS
			5200	1.89	≤8	PASS
			5240	0.90	≤8	PASS
	11N40SI SO	Ant1	5190	1.89	≤8	PASS
			5230	1.89	≤8	PASS
	11AC20S ISO	Ant1	5180	0.90	≤8	PASS
			5200	0.91	≤8	PASS
			5240	1.89	≤8	PASS
	11AC40S ISO	Ant1	5190	1.89	≤8	PASS
			5230	1.89	≤8	PASS
	11AC80S ISO	Ant1	5210	0.90	≤8	PASS

Please refer to the appendix G for test plots
The equipment met the requirement of this clause.

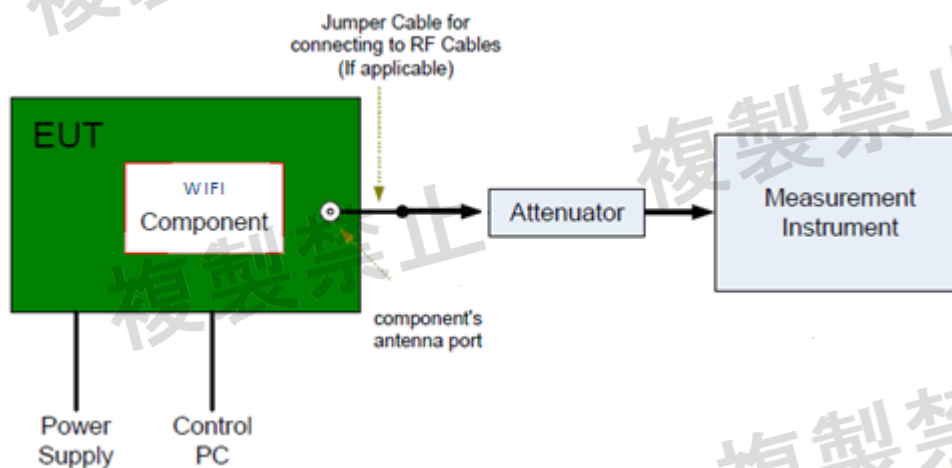
3.7 Secondary Radiated Emissions (Conducted) (For receiver)

Test Method:

17. Connect EUT test port to spectrum analyzer.
18. Set the EUT to transmit maximum output power at 5GHz.
19. Then set the EUT to transmit at Highest, Middle, and Lowest frequency separately.
20. Set RBW $\geq$ 1MHz, VBW $\geq$ RBW.
21. Set Sweep = auto.
22. Set Detector function = peak.
23. Allow the trace to stabilize.
24. Repeat above procedures until all frequencies measured were complete.

Test Setup:

The WIFI component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



3.7.1 Limit (ARIB STD-T71 V7.0)

Below 1GHz: 4nW or less

Above 1GHz: 20nW or less

3.7.2 Test Result

TestCondition	Test-Mode	Antenna	Freq (MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	11A	Ant1	5180	30~1000	709.00	-66.72	≤-54	0.21281	≤4	PASS
				1000~26000	23636.25	-60.48	≤-47	0.89536	≤20	PASS
			5200	30~1000	827.34	-69.84	≤-54	0.10375	≤4	PASS
				1000~26000	25857.50	-61.14	≤-47	0.76913	≤20	PASS
			5220	30~1000	936.95	-69.25	≤-54	0.11885	≤4	PASS
				1000~26000	25875.00	-60.97	≤-47	0.79983	≤20	PASS
	11N20SI SO	Ant1	5240	30~1000	959.75	-69.38	≤-54	0.11535	≤4	PASS
				1000~26000	22831.25	-60.10	≤-47	0.97724	≤20	PASS
			5180	30~1000	781.75	-68.60	≤-54	0.13804	≤4	PASS
				1000~26000	25657.50	-60.71	≤-47	0.84918	≤20	PASS
			5200	30~1000	909.79	-69.72	≤-54	0.10666	≤4	PASS
				1000~26000	25485.00	-60.84	≤-47	0.82414	≤20	PASS
			5220	30~1000	905.91	-68.81	≤-54	0.13152	≤4	PASS
				1000~26000	25602.50	-60.60	≤-47	0.87096	≤20	PASS
			5240	30~1000	795.33	-68.86	≤-54	0.13002	≤4	PASS
				1000~26000	24183.75	-61.11	≤-47	0.77446	≤20	PASS
	11N40SI SO	Ant1	5190	30~1000	875.36	-69.60	≤-54	0.10965	≤4	PASS
				1000~26000	23773.75	-61.69	≤-47	0.67764	≤20	PASS
			5230	30~1000	890.39	-68.82	≤-54	0.13122	≤4	PASS
				1000~26000	25468.75	-60.51	≤-47	0.88920	≤20	PASS
	11AC20S ISO	Ant1	5180	30~1000	878.75	-69.18	≤-54	0.12078	≤4	PASS
				1000~26000	25860.00	-60.92	≤-47	0.80910	≤20	PASS
			5200	30~1000	820.55	-69.14	≤-54	0.12190	≤4	PASS
				1000~26000	25665.00	-60.85	≤-47	0.82224	≤20	PASS
			5220	30~1000	983.51	-69.67	≤-54	0.10789	≤4	PASS
				1000~26000	25908.75	-60.82	≤-47	0.82794	≤20	PASS
			5240	30~1000	881.66	-68.67	≤-54	0.13583	≤4	PASS
				1000~26000	25768.75	-60.92	≤-47	0.80910	≤20	PASS
	11AC40S ISO	Ant1	5190	30~1000	888.45	-69.75	≤-54	0.10593	≤4	PASS
				1000~26000	25901.25	-60.61	≤-47	0.86896	≤20	PASS
			5230	30~1000	960.23	-69.48	≤-54	0.11272	≤4	PASS
				1000~26000	23442.50	-61.40	≤-47	0.72444	≤20	PASS
	11AC80S ISO	Ant1	5210	30~1000	978.66	-68.85	≤-54	0.13032	≤4	PASS
				1000~26000	25970.00	-60.98	≤-47	0.79799	≤20	PASS

Please refer to the appendix F for test plots
The equipment met the requirement of this clause.

3.8 Carrier Sensing

3.8.1 Limit

Stop transmission while carrier detecting

Field intensity in the direction of the maximum gain of a receiving antenna: 100mV/m (It's a radiated testing detection threshold level).

The conducted detection threshold level shows as below:

(6)式の電界強度 E を既定値の 100mV/m ($100\text{dB}\mu\text{V/m}$) とし、 λ (m)を F (MHz) に変換し、 P を dBm 単位で表すと (7) 式を得る。

$$P[\text{dBm}] = 22.79 + G - 20\log F \quad \text{-----} \quad (7)$$

P: 受信機のアンテナ端子に入力される受信電力 [dBm]

G: 受信アンテナの絶対利得 [dBi]

F: キャリア周波数 [MHz]

3.8.2 Test Procedure

A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.

Link EUT and Access Point to Directional Coupler input port. Link Signal Generator and Spectrum Analyzer to test port and output port in the Directional Coupler separately.

A positive Peak Detector function in Spectrum Analyzer must be used. Set the Span to Zero.

Press the Signal Generator on and it will output the Carrier Signal. When the Link breaks off, wait a minute and press the Signal Generator off. After a while, reset the Link and done the test.

3.8.3 TEST RESULTS

TestCondition	TestMode	Frequen- cy[MHz]	Power lever [dBm]	Verdict
NTNV	11a	5180	-48.026	PASS
		5240	-48.258	PASS
	N40	5190	-48.043	PASS
		5230	-48.110	PASS
	AC80	5210	-48.110	PASS

Signal Generator Power Level (dBm) = 22.79 + G - 20log10 (F)

G: Antenna Gain

F: operation frequency

3.9 Interference prevention function

3.9.1 Limit

Item	Limits
Identification Code	≥48 bits

Measuring ID code Software
MAC IP List: MAC Scan

3.9.2 Test Procedure

1. In the case that the EUT has the function of automatically transmitting the identification code: a. Transmit the predetermined identification codes from EUT. b. Check the transmitted identification codes with the demodulator.
2. In the case of receiving the identification code: a. Transmit the predetermined identification codes from the counterpart. b. Check if communication is normal. c. Transmit the signals other than predetermined ID codes from the counterpart. d. check if the EUT stops the transmission, or if it displays that identification codes are different from the predetermined ones.

3.9.3 Conditions of Equipment under Test

Required normal mode of the applicable equipment (EUT)

3.9.4 TEST RESULTS

The radio equipment has an identification code. A verification of this code is done before a communication channel is established

MAC: 12:CB:F1:F4:E9:E2

TEST RESULTS: PASS

End