



# TEST REPORT

Report Number: C21T00009-SRD04-V01

Applicant	Shanghai Sunmi Technology Co.,Ltd.
Product Name	Wireless data POS System
Model Name	T5930
Brand Name	SUNMI
FCC ID	2AH25V2

Industrial Internet Innovation Center (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in FCC Part15, ANSI C63.10, KDB 789033, KDB 905462.

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熊增新

Issue Date

2021-04-14

**Industrial Internet Innovation Center (Shanghai) Co., Ltd.**



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11. Report No.: C21T00009-SRD04-V01 is the replacement of Report No.: C21T00009-SRD04-V00, and the previous Report No.: C21T00009-SRD04-V00 has been invalid.

### **Test Laboratory:**

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Tel: +86 21 63843300



### Revision Version

Report Number	Revision	Date	Memo
C21T00009-SRD04-V00	00	2021-04-06	Initial creation of test report
C21T00009-SRD04-V01	01	2021-04-14	The statements and summary have been modified



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## 1. Test Laboratory

### 1.1. Testing Location

Company Name	Industrial Internet Innovation Center (Shanghai) Co., Ltd.
Address	Building 4, No. 766 Jingang Rd, Pudong, Shanghai, China
FCC Registration No.	CN1177

### 1.2. Testing Environment

Normal Temperature	15°C~35°C
Relative Humidity	30%RH~60%RH
Supply Voltage	120V/60Hz

### 1.3. Project Information

Project Leader	Lu Fang
Testing Start Date	2021-03-09
Testing End Date	2021-04-08



## 2. Client Information

### 2.1. Applicant Information

Company Name	Shanghai Sunmi Technology Co., Ltd.
Address	Room 505, KIC Plaza, No.388 Song Hu Road, Yang Pu District, Shanghai, China
Telephone	+86 18721763396

### 2.2. Manufacturer Information

Company Name	Shanghai Sunmi Technology Co., Ltd.
Address	Room 505, KIC Plaza, No.388 Song Hu Road, Yang Pu District, Shanghai, China
Telephone	+86 18721763396

### 3. Equipment under Test (EUT) and Ancillary Equipment (AE)

#### 3.1. About EUT

Product Name	Wireless data POS System
Model name	T5930
Supported Radio Technology and Bands	GSM850/GSM900/GSM1800/GSM1900 WCDMA Band I/II/IV/V LTE Band 2/3/4/7/17/28 BT4.0,BLE WLAN 802.11b/g/n WLAN 802.11a/n GPS L1
Hardware Version	V3
Software Version	ZAP1522_769_DEV_dailybuild_20181205071714_userdebug_DCC
WLAN Frequency	UNII 1: 5150MHz-5250MHz
WLAN type of modulation	OFDM
FCC ID	2AH25V2
Extreme Temperature	-15°C~55°C
Nominal Voltage	7.60 V
Extreme High Voltage	8.70V
Extreme Low Voltage	6.80V

#### 3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
N02(Main supply)	861741048621948	V3	ZAP1522_769_DEV_dailybuild_20181205071714_userdebug_DCC	2020-01-29
N08(Main supply)	861741048621921	V3	ZAP1522_769_DEV_dailybuild_20181205071714_userdebug_DCC	2020-01-29
N05(Secondary supply)	861741048621863	V3	ZAP1522_769_DEV_dailybuild_20181205071714_userdebug_DCC	2020-01-29

\*EUT ID: is internally used to identify the test sample in the lab.



### 3.3. Internal Identification of AE used during the test

AE ID*	Description	Model	SN/Remark
AE1	RF cable	---	AE1

\*AE ID: is internally used to identify the test sample in the lab.



## 4. Reference Documents

### 4.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part15	Title 47 of the Code of Federal Regulations; Chapter I Part 15 - Radio frequency devices	2018-10-01
ANSI 63.10	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2013
KDB 789033	Information Infrastructure (U-NII) Devices - Part 15, Subpart E	2017
KDB 905462	COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION	2016

### 4.2. Reference Information from client

Antenna gain Information of the test sample provided by Shanghai Sunmi Technology Co., Ltd.

Maximum of Antenna Gain: 0.62 dBi

## 5. Test Summary

### 5.1. Summary of Test Results

Measurement Items	Sub-clause of Part15C	Verdict
Maximum Output Power	15.407	P
Power Spectral Density	15.407	P
99% Occupied Bandwidth	15.407	P
Band edge compliance	15.407	P
Transmitter spurious emissions radiated	15.407	P
Spurious emissions radiated < 30 MHz	15.407	P
Spurious emissions conducted < 30 MHz	15.407	P
Peak Excursion	15.407	P
Frequency Stability	15.407	P
Transmit Power Control	15.407	P

Note: please refer to Annex A in this test report for the detailed test results.

#### Test Conditions

Tnom	Normal Temperature
Tmin	Low Temperature
Tmax	High Temperature
Vnom	Normal Voltage
Vmin	Low Voltage
Vmax	High Voltage
Hnom	Norm Humidity
Anom	Norm Air Pressure

For this report, all the test case listed above are tested under Normal Temperature and Normal Voltage, and also under norm humidity, the specific conditions as following:

Temperature	Tnom	25°C
Voltage	Vnom	3.80V
Humidity	Hnom	48%
Air Pressure	Anom	1010hPa



## 5.2. Statements

The T5930, manufactured by Shanghai Sunmi Technology Co., Ltd. is a variant product for testing.

This project is a variant project based on the original report I18D00236-SRD06, We changed the power level setting of n-40M mode, tested the power of n-40M mode, and retested the PSD and spurious test items in the worst mode. At the same time, We tested the worst case radiation data, and the test data of the worst mode was recorded in the report. The rest of the data are reference prototype

Industrial Internet Innovation Center (Shanghai) Co., Ltd. only performed test cases which identified with Pass/Fail/Inc result in section 5.1.

Industrial Internet Innovation Center (Shanghai) Co., Ltd. has verified that the compliance of the tested device specified in section 3 of this test report is successfully evaluated according to the procedure and test methods as defined in type certification requirement listed in section 4 of this test report.

## 6. Measurement Results

**Shielding Room1** (6.0 meters×3.0 meters×2.7 meters) did not exceed following limits along the conducted RF performance testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	> 100 dB
Ground system resistance	< 0.5 Ω

**Control room** did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. =30 %, Max. = 60 %
Shielding effectiveness	> 100 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

**Fully-anechoic chamber1** (6.9 meters×10.9 meters×5.4 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 25 %, Max. = 75 %
Shielding effectiveness	> 100 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
VSWR	Between 0 and 6 dB, from 1GHz to 18GHz
Site Attenuation Deviation	Between -4 and 4 dB,30MHz to 1GHz
Uniformity of field strength	Between 0 and 6 dB, from 80MHz to 3000 MHz

## 6.1. Maximum output Power

### Measurement Limit and Method:

Standard	Frequency (MHz)	Limit (dBm)
FCC CRF Part 15.407(a)	5150MHz~5250MHz	24dBm
	5250MHz~5350MHz	24dBm or 11+10logB
	5470MHz~5725MHz	24dBm or 11+10logB

Limit use the less value, and B is the 26dB bandwidth.

The measurement method SA-1 is made according to KDB 789033.

Set the spectrum analyzer in the following:

Detector: RMS.

RBW=1MHz.

VBW=3MHz.

Sweep time = AUTO.

Span: 30MHz (for 20MHz); 60MHz (for 40MHz); 120MHz (for 80MHz).

### Measurement Results:

#### U-NII-1

Mode	Duty Cycle(%)	Duty Cycle Factor (dB)
802.11n(40MHz)	96.82	0.15

Mode	Data Rate	Test Result(dBm)		
		5190MHz	/	5230MHz
802.11n(40MHz)	MCS0	9.06	/	8.82

The data rate MCS0 are selected as worse condition, and the following cases are performed with this condition.

## 6.2. Peak Power Spectral Density

### Measurement Limit:

Standard	Frequency (MHz)	Limit (dBm)
FCC CRF Part 15.407(a)	5150MHz~5250MHz	11
	5250MHz~5350MHz	11
	5470MHz~5725MHz	11

The output power measurement method SA-1 is made according to KDB 789033

### Measurement Results:

#### U-NII-1:

Power Spectral Density(dBm/MHz) (802.11a, 5180MHz)	3.26	Power Spectral Density(dBm/MHz) (802.11a, 5200MHz)	2.82
<p>Date: 1.APR.2021 16:37:24</p>		<p>Date: 1.APR.2021 16:38:14</p>	
Power Spectral Density (dBm/MHz) (802.11a, 5240MHz)	3.22	/	/
<p>Date: 1.APR.2021 16:39:06</p>			

### 6.3. Band Edges Compliance

#### 6.3.1 Band Edges - conducted

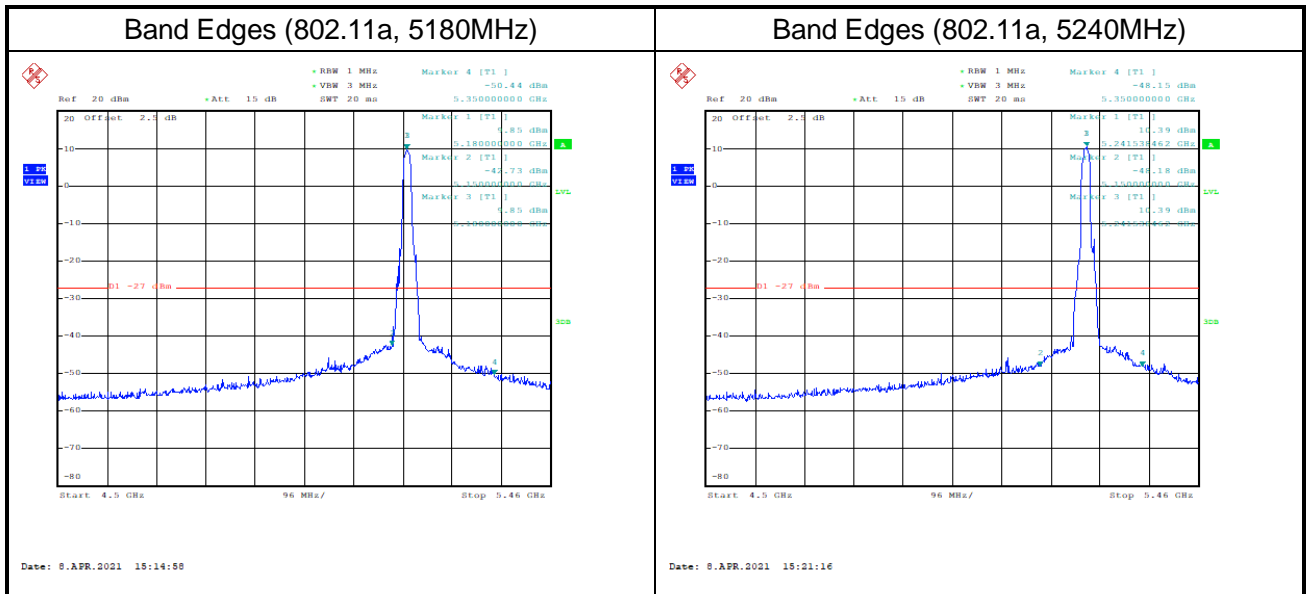
##### Measurement Limit:

Standard	Limit (dBm/MHz)
FCC 47 CFR Part 15.407	< -27

The measurement is made according to KDB 789033

##### Measurement Result:

##### U-NII-1:



### 6.3. 2 Band Edges - Radiated

#### Measurement Limit:

Standard	Limit (dB $\mu$ V/m)	
FCC 47 CFR Part 15.209	Peak	68.2
	Average	54

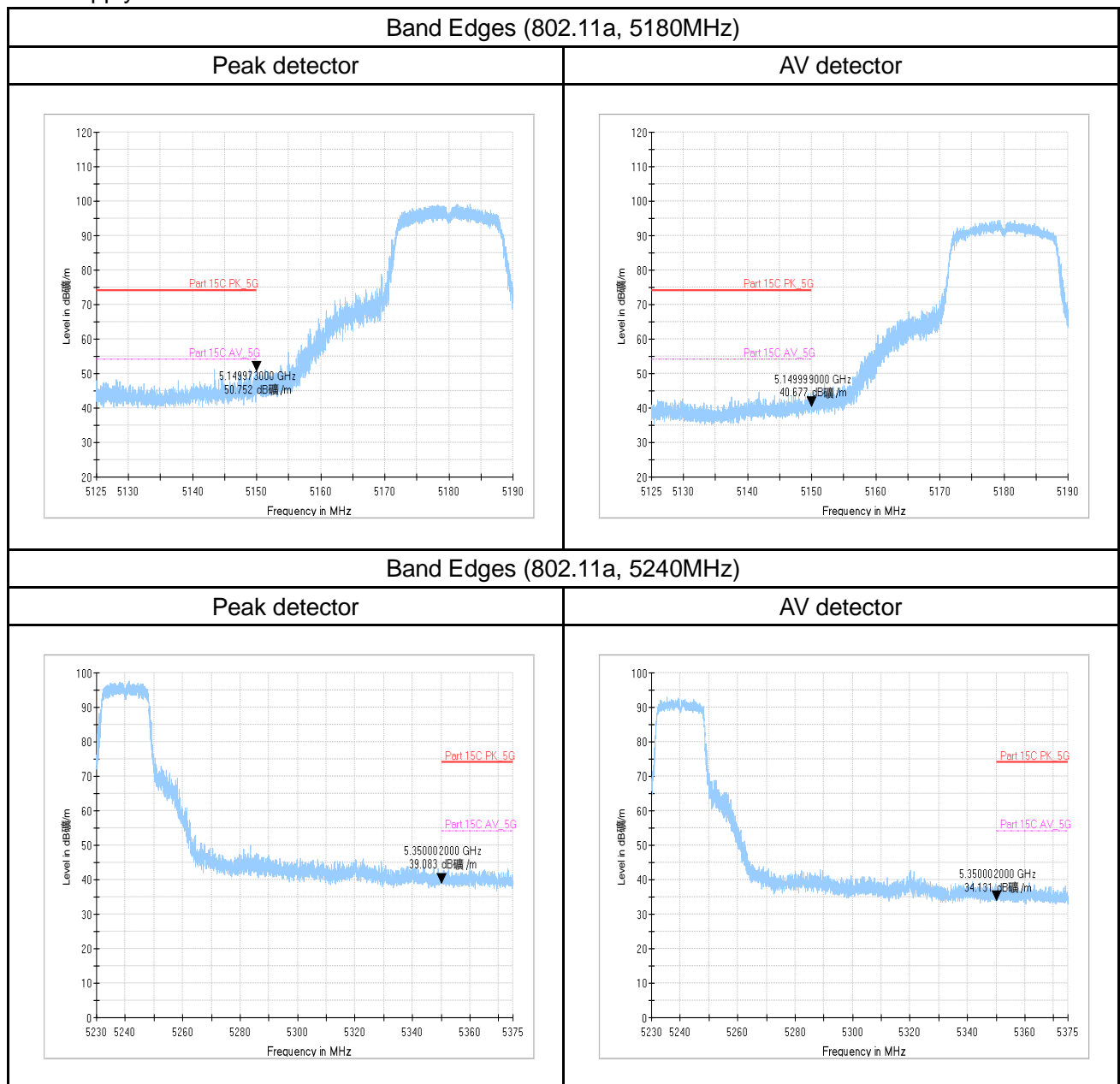
The measurement is made according to KDB 789033.

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

#### Measurement Result:

##### U-NII-1:

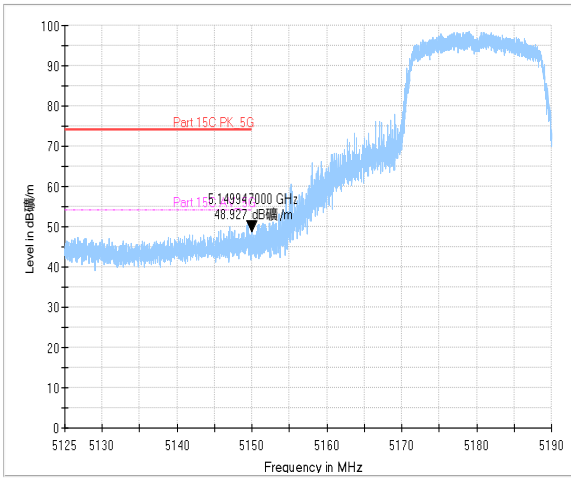
Main supply:



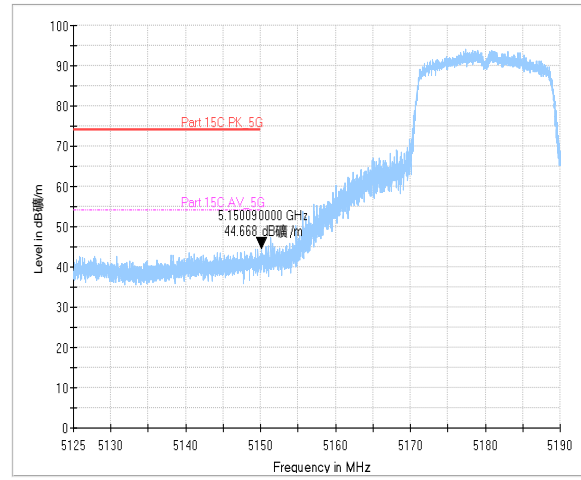


### Band Edges (802.11n-HT20, 5180MHz)

Peak detector

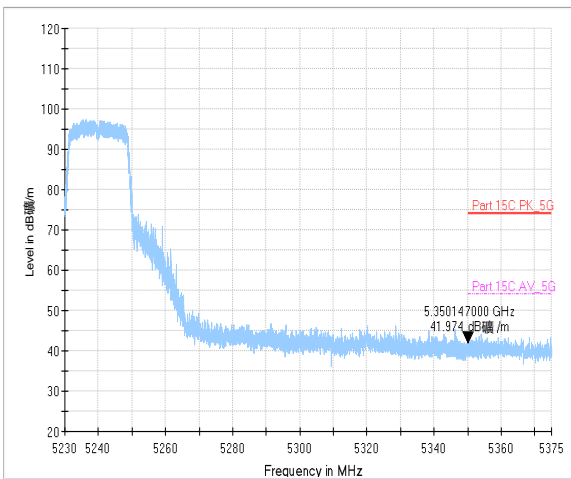


AV detector

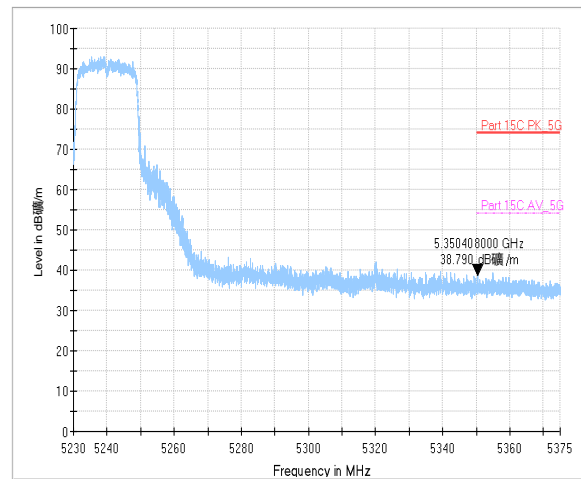


### Band Edges (802.11n-HT20, 5240MHz)

Peak detector

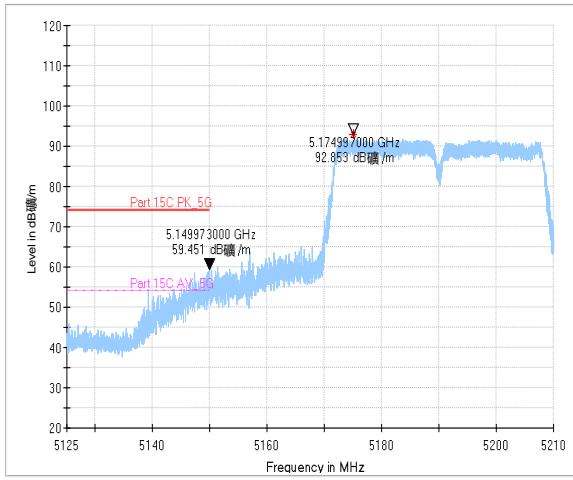


AV detector

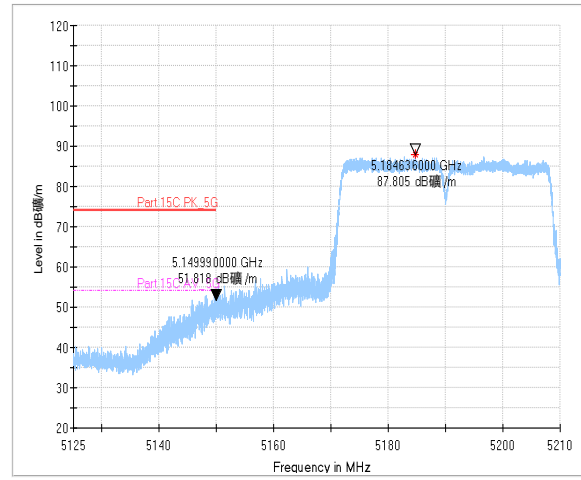


### Band Edges (802.11n-HT40, 5190MHz)

Peak detector

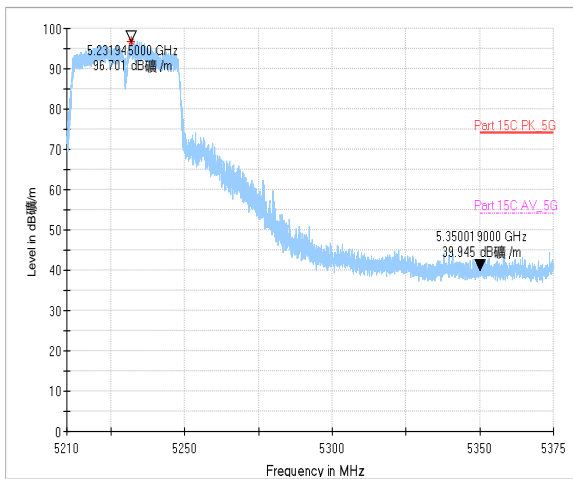


AV detector

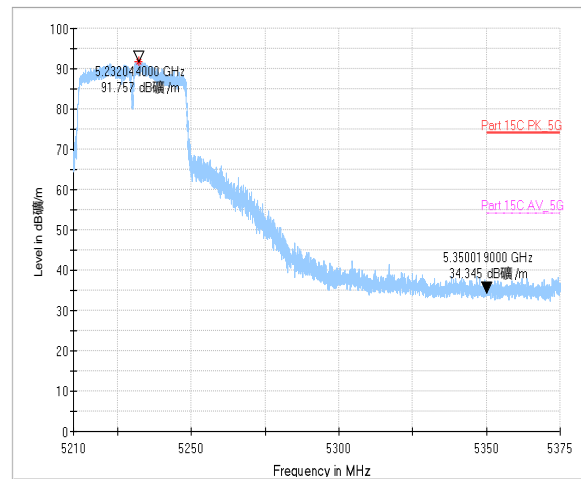


### Band Edges (802.11n-HT40, 5230MHz)

Peak detector



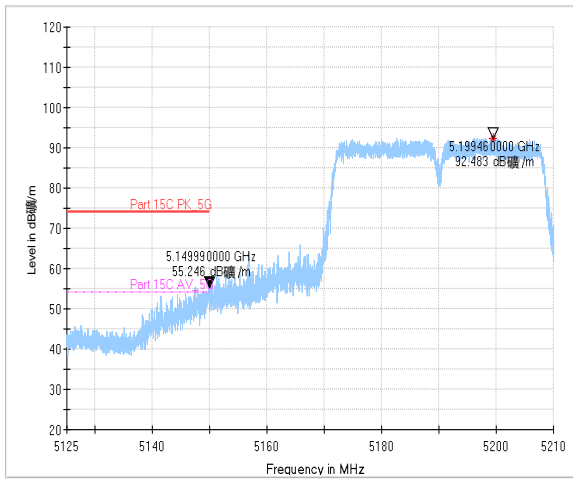
AV detector



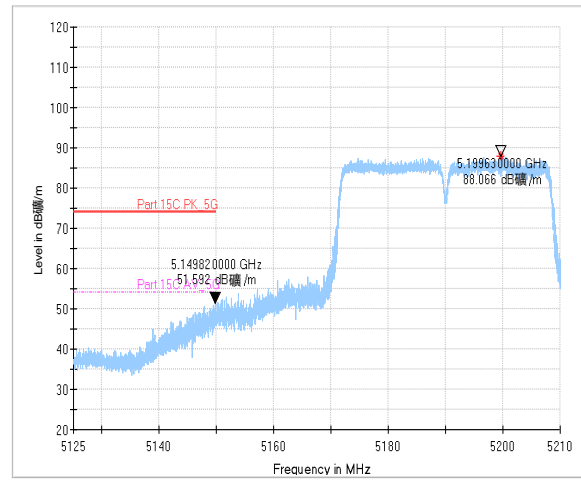
Secondary supply:

Band Edges (802.11n-HT40, 5190MHz)

Peak detector

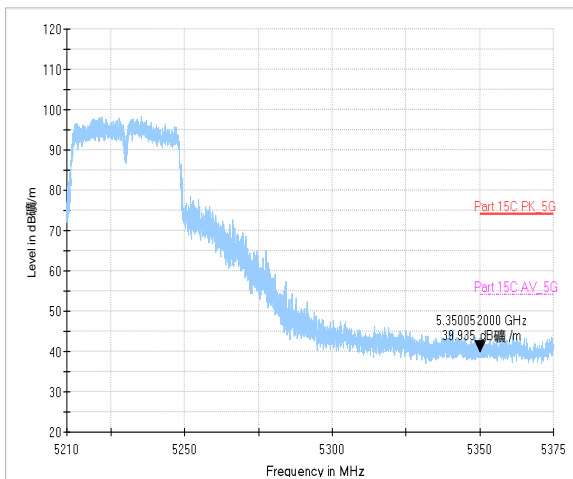


AV detector

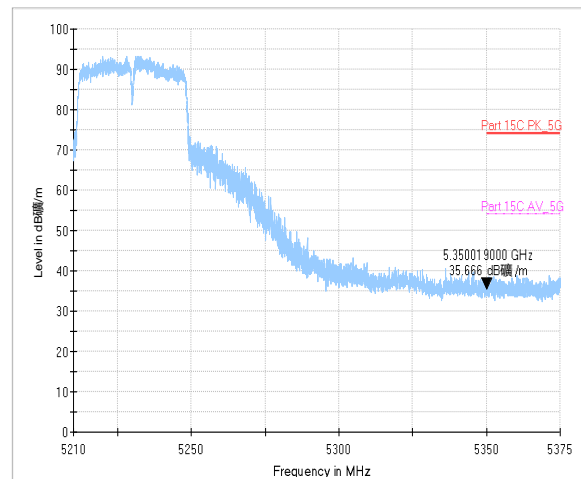


Band Edges (802.11n-HT40, 5230MHz)

Peak detector



AV detector



## 6.4. Transmitter Spurious Emission

### Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407	-27 dBm/MHz

The measurement is made according to KDB 789033

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

The Equipment Under Test (EUT) was set up on a non-conductive table in the semi-anechoic chamber. The test was performed at the distance of 3 m between the EUT and the receiving antenna. The radiated emissions measurements were made in a typical installation configuration.

During the test, the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turntable shall be rotated from 0 to 360 degrees for detecting the maximum of radiated spurious signal level. The measurements shall be repeated with orthogonal polarization of the test antenna. The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing.

Set the spectrum analyzer in the following:

Below 1GHz (detector: Peak and Quasi-Peak)

RBW=100kHz / VBW=300kHz / Sweep=AUTO

Above 1GHz (detector: Peak):

(a) PEAK: RBW=1MHz / VBW=3MHz / Sweep=AUTO

(b) AVERAGE: RBW=1MHz / VBW=3MHz / Sweep= AUTO

### Limit in restricted band:

Frequency of emission (MHz)	Field strength(dBμV/m)	Measurement distance(m)
0.009-0.490	129-94	3
0.490-1.705	74-63	3
1.705-30	70	3
30-88	40.0	3
88-216	43.5	3
216-960	46.0	3
Above 960	54.0	3

Note: for frequency range below 960MHz, the limit in 15.209 is defined in 10m test distance. The limit used above is calculated from 10m to 3m

Modulation type and data rate tested (Only worst case result is given below):



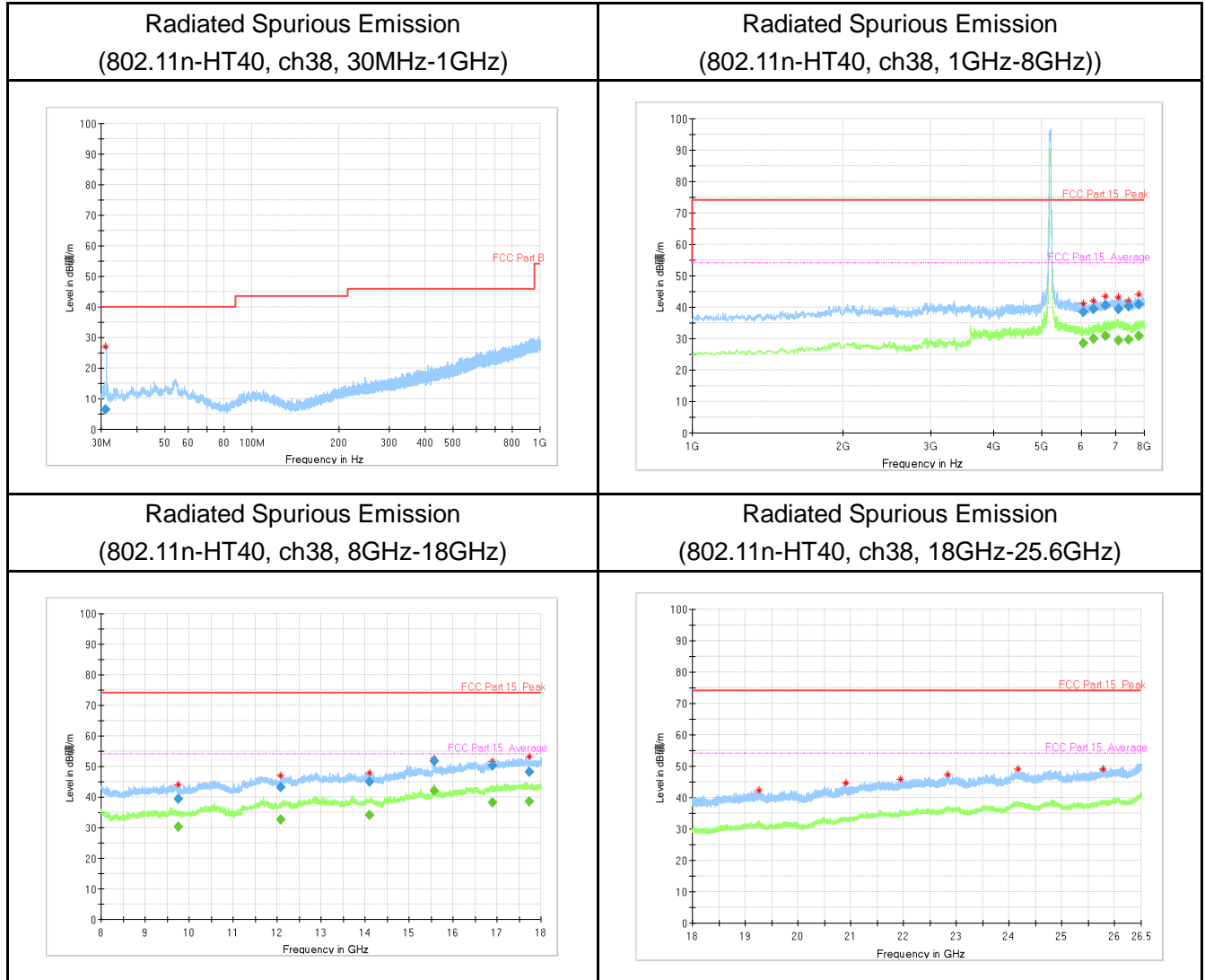
U-NII-1:

Mode	Data rate	Channel
802.11n-HT40	MCS0	38(5190MHz)

**Measurement Results:**

U-NII-1:

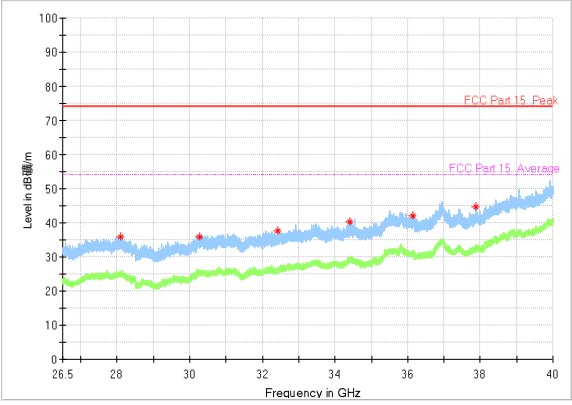
Main supply:



<p style="text-align: center;"><b>Radiated Spurious Emission</b> (802.11n-HT40, ch38, 25.6GHz-40GHz)</p>	/
	/

Secondary supply:

<p style="text-align: center;"><b>Radiated Spurious Emission</b> (802.11n-HT40, ch38, 30MHz-1GHz)</p>	<p style="text-align: center;"><b>Radiated Spurious Emission</b> (802.11n-HT40, ch38, 1GHz-8GHz)</p>
<p style="text-align: center;"><b>Radiated Spurious Emission</b> (802.11n-HT40, ch38, 8GHz-18GHz)</p>	<p style="text-align: center;"><b>Radiated Spurious Emission</b> (802.11n-HT40, ch38, 18GHz-25.6GHz)</p>

<p style="text-align: center;"><b>Radiated Spurious Emission</b> (802.11n-HT40, ch38, 25.6GHz-40GHz)</p>	/
	/

**Note:**

A "reference path loss" is established and the  $A_{Rpl}$  is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

$P_{Mea}$  is the field strength recorded from the instrument.

The measurement results are obtained as described below:

$$Result = P_{Mea} + A_{Rpl} = P_{Mea} + Cable Loss + Antenna Factor$$



**U-NII-1:**

Main supply:

RSE-11N(40M)-CH38-30M-1G-N08

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
31.2	6.4	-18.1	24.5	V

RSE-11N(40M)-CH38-1G-8G-N08

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
6032.6	38.6	2.9	35.7	V
6336.2	39.45	3.6	35.85	V
6687.8	40.67	4.6	36.07	H
7094.8	39.47	4.9	34.57	H
7442.4	40.44	4.3	36.14	H
7808.4	40.95	4.8	36.15	H

RSE-11N(40M)-CH38-8G-18G-N08

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
9752.4	39.42	5.9	33.52	H
12074.2	43.13	10.8	32.33	H
14108.8	44.99	12.7	32.29	H
15566.8	51.87	15.4	36.47	H
16889.0	50.35	18.3	32.05	H
17743.8	48.31	18.8	29.51	V

RSE-11N(40M)-CH38-18G-26.5G-N08

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
19265.6	42.43	-4.8	47.23	V
20914.6	44.65	-2.5	47.15	H
21938.0	45.93	-2.2	48.13	H
22840.8	47.28	-0.6	47.88	V
24176.1	49.11	0	49.11	H
25774.1	49.05	0.9	48.15	V

RSE-11N(40M)-CH38-26.5G-40G-N08

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
28036.3	36.24	0.4	35.84	V
30328.6	36.99	1.1	35.89	H
32611.4	38.44	3.7	34.74	V
34451.5	40.17	4.5	35.67	V



36962.5	45.58	8.3	37.28	V
39294.0	48.83	12.2	36.63	H

RSE-11N(40M)-CH46-30M-1G-N08

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
71.9	3.73	-19	22.73	V

RSE-11N(40M)-CH46-1G-8G-N08

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
5764.6	38.96	3.1	35.86	H
6099.4	38.04	3.3	34.74	H
6400.8	40.63	3.5	37.13	H
6985.8	39.66	4.6	35.06	V
7389.8	40.31	4.4	35.91	V
7881.2	41.59	5	36.59	V

RSE-11N(40M)-CH46-8G-18G-N08

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
8761.0	41.16	4.6	36.56	V
10382.4	41.02	8.1	32.92	V
11807.0	43.1	10.4	32.7	V
12945.2	43.29	12	31.29	V
14842.2	46.91	14.6	32.31	H
16480.0	48.34	17.7	30.64	H

RSE-11N(40M)-CH46-18G-26.5G-N08

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
18802.4	42.29	-4.9	47.19	V
20553.4	43.98	-3.3	47.28	H
22310.4	46.31	-1.8	48.11	H
23488.4	47.85	-1.3	49.15	H
24658.9	48.64	0.2	48.44	V
26004.4	49.54	-0.9	50.44	H

RSE-11N(40M)-CH46-26.5G-40G-N08

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
27733.9	35.69	-0.6	36.29	H
30502.8	36.22	1.1	35.12	V
33067.8	38.72	4.3	34.42	H
35831.2	44.33	6.4	37.93	H



36966.6	45.55	8.3	37.25	V
38666.2	48.73	10.8	37.93	H

Secondary supply:

RSE-11N(40M)-CH38-30M-1G-N05

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
39.3	11.58	-16.6	28.18	V
54.0	9.83	-15.7	25.53	V
101.2	6.16	-16.6	22.76	V
204.2	7.17	-15.4	22.57	V
365.3	11.64	-10.8	22.44	H
734.9	19.05	-3.5	22.55	H

RSE-11N(40M)-CH38-1G-8G-N05

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
4542.6	38.92	2.1	36.82	V
5649.4	40.78	3.2	37.58	V
6198.8	40.53	3.5	37.03	H
6688.2	39.94	4.6	35.34	H
7148.2	40.25	4.7	35.55	V
7562.2	38.87	4	34.87	V

RSE-11N(40M)-CH38-8G-18G-N05

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
9559.2	40.09	6.3	33.79	V
11220.2	42.78	8.4	34.38	H
13187.4	43.56	11.4	32.16	H
14017.4	43.46	12.7	30.76	V
15672.8	45.78	15.7	30.08	H
17040.0	49.56	18.1	31.46	H

RSE-11N(40M)-CH38-18G-26.5G-N05

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
19016.6	41.99	-4.5	46.49	V
20459.9	42.96	-3	45.96	V
21641.4	45.95	-2.4	48.35	V
22838.2	46.76	-0.6	47.36	H
24230.5	48.56	0	48.56	V
25376.3	48.49	-0.4	48.89	H



RSE-11N(40M)-CH38-26.5G-40G-N05

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
28103.8	35.96	1	34.96	H
30277.3	35.86	1	34.86	V
32422.4	37.59	3.1	34.49	V
34411.0	40.34	4.6	35.74	H
36132.2	42.13	6.1	36.03	V
37888.6	44.57	8.6	35.97	V

RSE-11N(40M)-CH46-30M-1G-N08

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
39.1	11.41	-16.7	28.11	V
69.5	4.57	-18.8	23.37	V
102.9	5.2	-16.6	21.8	H
113.8	5.78	-17	22.78	V
228.2	7.85	-14.7	22.55	H
597.1	17.28	-5	22.28	V

RSE-11N(40M)-CH46-1G-8G-N08

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
4684.6	39.21	2.2	37.01	V
5692.8	40.93	3.2	37.73	H
6193.6	38.34	3.5	34.84	H
6665.2	39.32	4.3	35.02	V
7155.2	40.46	4.7	35.76	V
7772.2	40.21	4.9	35.31	H

RSE-11N(40M)-CH46-8G-18G-N08

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
9292.6	40.14	5.7	34.44	H
11619.4	43.11	10.3	32.81	V
12986.8	43.07	11.8	31.27	V
14103.2	44.04	12.7	31.34	V
15690.8	48.44	15.7	32.74	H
17530.2	47.79	18.5	29.29	H

RSE-11N(40M)-CH46-18G-26.5G-N08

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
19015.8	41.63	-4.5	46.13	H



20298.4	42.4	-4.4	46.8	H
21564.0	45.28	-2.2	47.48	H
22869.6	47.29	-0.6	47.89	H
24111.5	48.71	-0.1	48.81	H
25390.8	48.52	-0.5	49.02	V

RSE-11N(40M)-CH46-26.5G-40G-N08

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
27987.7	36.22	-0.1	36.32	H
30798.4	39.07	-0.1	39.17	V
32809.9	37.59	3.9	33.69	V
34590.6	39.89	4.5	35.39	V
36896.4	44.66	8.4	36.26	H
38756.6	47.81	11.1	36.71	H

## 7. Test Equipment List

### 7.1. Conducted Test System

Item	Equipment Name	Type	Serial Number	Manufacturer	Cal. Date	Cal. interval
1	Vector Signal Analyzer	FSQ26	101091	R&S	2020-05-10	1 year
2	DC Power Supply	ZUP60-14	LOC-220Z006-0007	TDL-Lambda	2020-05-10	1 year
3	Eagle Test Software	Eagle V3.1 FCC BT/WIFI	N/A	ECIT	N/A	N/A

### 7.2. Radiated Emission Test System

Item	Equipment Name	Type	Serial Number	Manufacturer	Cal. Date	Cal. interval
1	Universal Radio Communication Tester	CMU200	123123	R&S	2020-05-10	1 year
2	EMI Test Receiver	ESU40	100307	R&S	2020-05-10	1 year
3	TRILOG Broadband Antenna	VULB9163	VULB9163-515	Schwarzbeck	2020-02-28	2 years
4	Double-ridged Waveguide Antenna	ETS-3117	00135890	ETS	2020-02-28	2 years
5	2-Line V-Network	ENV216	101380	R&S	2020-05-10	1 year
6	EMI Test Software	EMC32 V 9.15.00	N/A	R&S	N/A	N/A

### 7.3. Climate chamber

Item	Equipment Name	Type	Serial Number	Manufacturer	Cal. Date	Cal. interval
1	Climate chamber	UT333 BT	C191995461	UNI-T	2020-05-10	1 year

Anechoic chamber

Fully anechoic chamber by ETS.

## Annex A: Measurement Uncertainty

Measurement uncertainty for all the testing in this report are within the limit specified in 3IN documents .  
The detailed measurement uncertainty is defined in 3IN documents.

Measurement Items	Range	Confidence Level	Calculated Uncertainty
Peak Output Power-Conducted	5100MHz-5875MHz	95%	1.024dB
Peak Power Spectral Density	5100MHz-5875MHz	95%	1.024dB/MHz
Conducted Emission	30MHz-2GHz	95%	0.90dB
Conducted Emission	2GHz-3.6GHz	95%	0.88dB
Conducted Emission	3.6GHz-8GHz	95%	0.96dB
Conducted Emission	8GHz-20GHz	95%	0.94dB
Conducted Emission	20GHz-22GHz	95%	0.88dB
Conducted Emission	22GHz-26GHz	95%	0.86dB
Transmitter Spurious Emission-Radiated	9KHz-30MHz	95%	5.66dB
Transmitter Spurious Emission-Radiated	30MHz-1000MHz	95%	4.98dB
Transmitter Spurious Emission-Radiated	1000MHz -18000MHz	95%	5.06dB
Transmitter Spurious Emission-Radiated	18000MHz -40000MHz	95%	5.20dB

## Annex B: Accreditation Certificate



### Accredited Laboratory

A2LA has accredited

**Industrial Internet Innovation Center (Shanghai) Co., Ltd.**

Shanghai, People's Republic of China

for technical competence in the field of

**Electrical Testing**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of any additional program requirements in the «field» field. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 6th day of May 2019.

Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 3682.01  
Valid to April 30, 2021  
Revised February 17, 2021

For the tests to which this accreditation applies, please refer to the laboratory's Electrical«field» Scope of Accreditation.

\*\*\*\*\*END OF REPORT\*\*\*\*\*