



TEST REPORT

Report Number: C20T00017-EMC01

Applicant	NetEase Youdao Information Technology (Beijing) Co., Ltd.
Product Name	Youdao Dictionary Pen 3
Model Name	YDP031
Brand Name	Youdao
FCC ID	2AV6G-YDP031

Industrial Internet Innovation Center (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in FCC Part 15, Subpart B, ANSI C63.4-2014.

Prepared by

Reviewed by

Approved by

Issue Date

2021.01.29

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

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10. The measurement uncertainty is not taken into account when deciding conformity, and the results of measurement (or the average of measurement results) are directly used as the criterion for the stating conformity.
11. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as specified in this report.

Test Laboratory:

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

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Revision Version

Report Number	Revision	Date	Memo
C20T00017-EMC01	00	2021-01-29	Initial creation of test report

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1. Test Laboratory

1.1. Testing Location

Primary Lab:

Company Name	Industrial Internet Innovation Center (Shanghai) Co., Ltd.
Address	Building 4, No. 766 Jingang Rd, Pudong, Shanghai, China
FCC Registration No.	958356
FCC Designation 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	Xu Yuting
Testing Start Date	2020-11-18
Testing End Date	2021-01-12

2. Client Information

2.1. Applicant Information

Company Name	NetEase Youdao Information Technology (Beijing) Co., Ltd.
Address	No.7 Building,Zhongguancun Software Park West,No.10 Xibeiwang East RD,Haidian District,Beijing,PRC
Telephone	13586835362

2.2. Manufacturer Information

Company Name	Mobiwire Mobiles(NingBo) Co.,LTD
Address	Building A,No.999 Dacheng East Road,Fenghua District,Ningbo City,Zhejiang Province,PRC
Telephone	13586835362

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

3.1. About EUT

Product Name	Youdao Dictionary Pen 3
Model name	YDP031
Supported Radio Technology and Bands	BT4.2 WLAN 802.11b,g,n
Hardware Version	WM98-CHERRY-DVT2
Software Version	V1.0.0
FCC ID	2AV6G-YDP031

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
N05	2AA1400000302735	WM98-CHERRY-DVT2	V1.0.0	2020-11-18

*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
UA03	USB Cable	N/A	N/A
AE1	Adapter	A1443	N/A

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

*The AE is provided by 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 Part 15, Subpart B	Radio frequency devices	2019/10/01
ANSI C63.4	Method of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2014

5. Test Summary

5.1. Summary of Test Results

Items	Test List	Clause in FCC rules	Verdict
1	Radiated Emission	15.109(a)	Pass
2	AC Conducted Emission	15.107(a)	Pass

5.2. Statements

The YDP031, manufactured by Mobiwire Mobiles(NingBo) Co.,LTD is a new product for testing.

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.

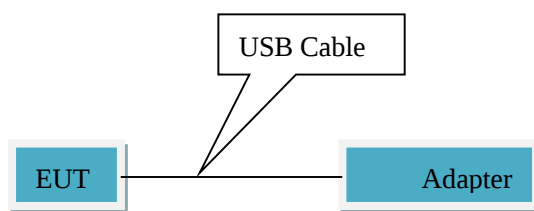
5.3. Decision of final test mode

The EUT was tested together with the above additional components, and a configuration, which produced the worst emission levels, was selected and recorded in this report.

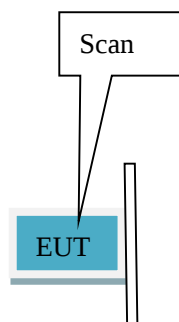
The test configuration modes are as the following:

Test Item	Test setup and operating modes
AC Conducted Emission	Mode 1: Adapter charging mode <Figure 1>
Radiated Emission	Mode 1: Adapter charging mode <Figure 1> Mode 2: Scan mode <Figure 2>
Remark: 1. All test modes are performed, only the worst cases test data are recorded in this report. 2. Scan mode: The EUT keeps the scan state.	

5.4. EUT Connection Diagram of Test System



<Figure 1>



<Figure 2>

6. Measurement Results

6.1. Radiated Emission 30MHz-18GHz

Method of Measurement

For 30MHz -1000MHz, the EUT was placed on the top of a rotating 0.8m table above the ground at a semi-anechoic chamber. The distance between the EUT and the received antenna was 3 meters. The table was rotated 360 degree and the received antenna mounted on a variable-height antenna tower was varied from 1m to 4m to find the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna were set during the measurement. Tested in accordance with the procedures of ANSI C63.4-2014, section 8.3.

For 1000MHz-18000MHz, The maximal emission value was acquired by adjusting the antenna height, The table was rotated 360 degree to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna were set during the measurement.

Limits for Radiated Emission at a measuring distance of 3m

Frequency Range (MHz)	Quasi-Peak (dBuV/m)
30-88	40
88-216	43.5
216-960	46
Above 960	54

Frequency Range (MHz)	Peak (dBuV/m)	Average (dBuV/m)
Above 1000	74	54

Test conditions

Frequency Range (MHz)	RBW/VBW	Sweep Time (s)
30-1000	120kHz/300kHz	Auto
1000-18000	1MHz/3MHz	Auto

Uncertainty Measurement

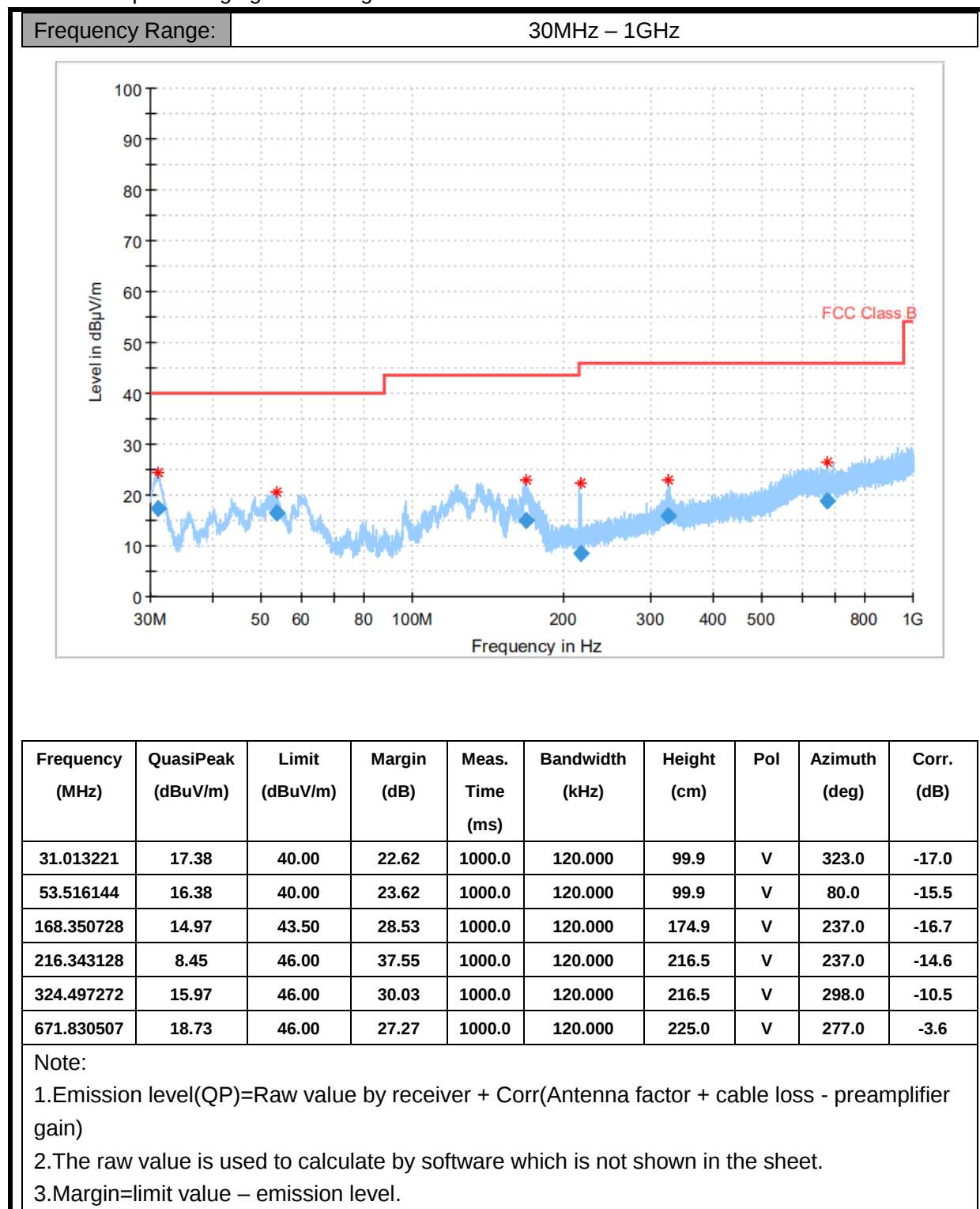
The measurement uncertainty (30MHz-1000MHz) is 4.82 dB (k=2).

The measurement uncertainty (1000MHz-18000MHz) is 5.08 dB (k=2).

Test Results

Sweep the whole frequency band through the range from 30MHz to the 5th harmonic of the carrier, the Emissions in the frequency band 18GHz-40GHz is more than 20dB below the limit are not report.

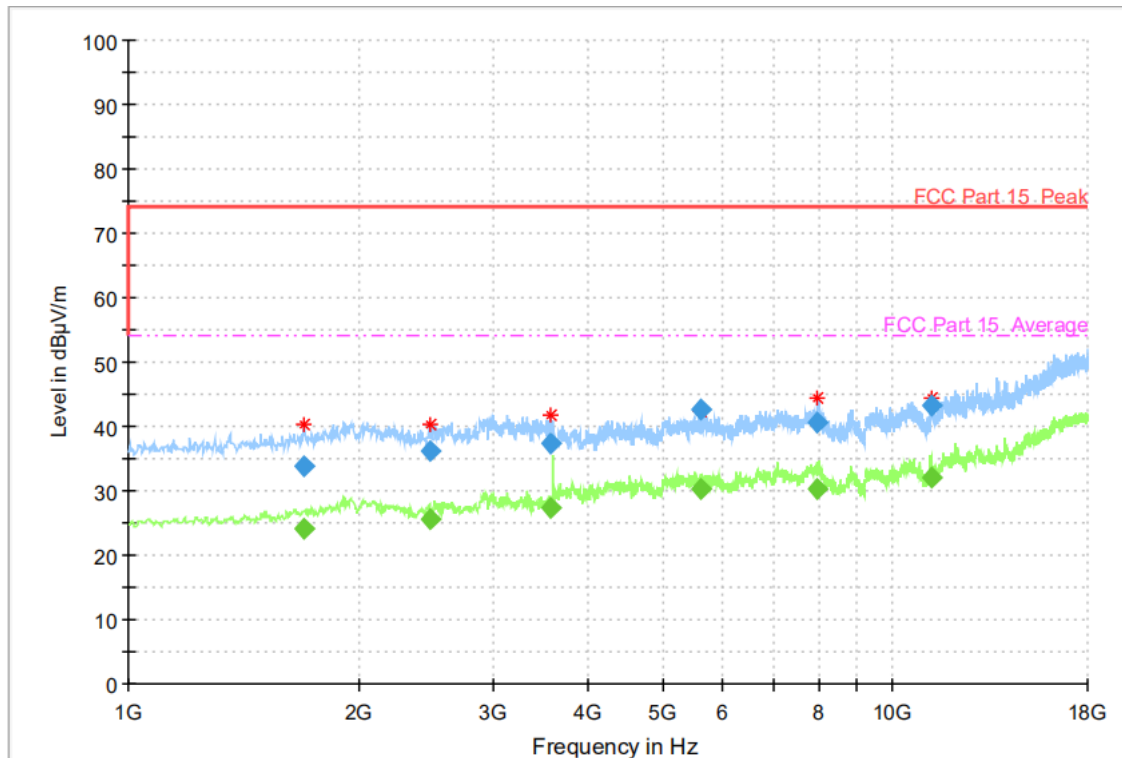
Mode 1: Adapter charging mode <Figure 1>



Mode 1: Adapter charging mode <Figure 1>

Frequency Range:

1GHz –18GHz

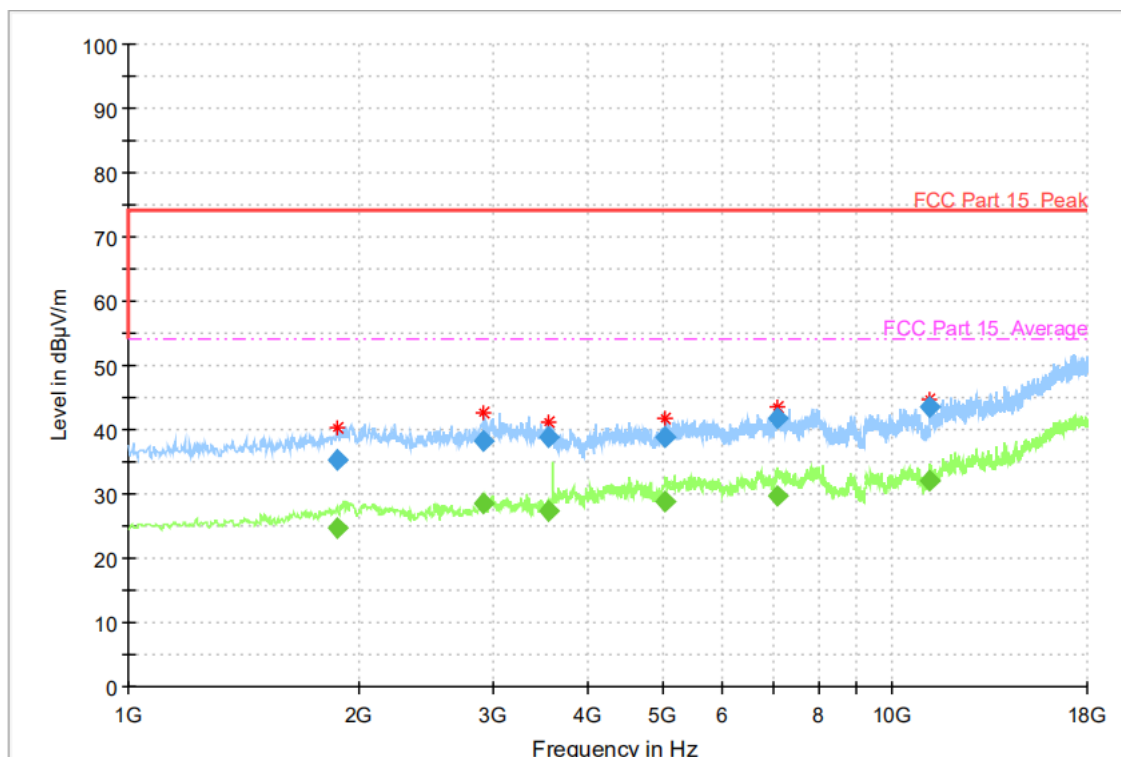


Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time	Band width	Height	Po l	Azimu th	Corr. (dB)
1701.400000	33.68	---	74.00	40.32	1.0	1000.	200.0	H	271.0	4.1
1701.400000	---	23.98	54.00	30.02	1.0	1000.	200.0	H	271.0	4.1
2480.000000	36.22	---	74.00	37.78	1.0	1000.	100.0	H	45.0	3.5
2480.000000	---	25.58	54.00	28.42	1.0	1000.	100.0	H	45.0	3.5
3576.400000	37.47	---	74.00	36.53	1.0	1000.	100.0	H	67.0	1.8
3576.400000	---	27.44	54.00	26.56	1.0	1000.	100.0	H	67.0	1.8
5600.400000	---	30.39	54.00	23.61	1.0	1000.	200.0	H	97.0	3.6
5600.400000	42.52	---	74.00	31.48	1.0	1000.	200.0	H	97.0	3.6
7991.200000	40.65	---	74.00	33.35	1.0	1000.	100.0	H	225.0	5.3
7991.200000	---	30.28	54.00	23.72	1.0	1000.	100.0	H	225.0	5.3
11250.200000	---	31.97	54.00	22.03	1.0	1000.	200.0	H	356.0	8.5
11250.200000	43.15	---	74.00	30.85	1.0	1000.	200.0	H	356.0	8.5

Note:

- 1.Emission level(peak or average)=Raw value by receiver + Corr(Antenna factor+ cable loss - preamplifier gain)
- 2.The raw value is used to calculate by software which is not shown in the sheet.
- 3.Margin=limit value – emission level.



Final Result

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth	Height	Polarization	Azimuth	Corr. (dB)
1873.400000	35.37	---	74.00	38.63	1.0	1000.00	100.0	V	222.0	4.5
1873.400000	---	24.63	54.00	29.37	1.0	1000.00	100.0	V	222.0	4.5
2925.000000	38.12	---	74.00	35.88	1.0	1000.00	200.0	V	209.0	3.3
2925.000000	---	28.41	54.00	25.59	1.0	1000.00	200.0	V	209.0	3.3
3539.200000	---	27.32	54.00	26.68	1.0	1000.00	100.0	V	150.0	2.0
3539.200000	38.97	---	74.00	35.03	1.0	1000.00	100.0	V	150.0	2.0
5045.600000	---	28.71	54.00	25.29	1.0	1000.00	100.0	V	0.0	6.1
5045.600000	38.94	---	74.00	35.06	1.0	1000.00	100.0	V	0.0	6.1
7074.800000	---	29.81	54.00	24.19	1.0	1000.00	200.0	V	0.0	4.9
7074.800000	41.70	---	74.00	32.30	1.0	1000.00	200.0	V	0.0	4.9
11203.000000	---	32.14	54.00	21.86	1.0	1000.00	200.0	V	357.0	8.4
11203.000000	43.44	---	74.00	30.56	1.0	1000.00	200.0	V	357.0	8.4

Note:

1. Emission level (peak or average) = Raw value by receiver + Corr (Antenna factor + cable loss - preamplifier gain)
2. The raw value is used to calculate by software which is not shown in the sheet.
3. Margin = limit value - emission level.

6.2. AC Conducted Emission

Method of Measurement

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies with the band 150 kHz to 30MHz shall not exceed the limits. Both lines of the power mains connected to the EUT were checked for maximum conducted interference. Tested in accordance with the procedures of ANSI C63.4-2014, section 7.3

Limit of Conducted Emission

Frequency Range (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
*Decreases with the logarithm of the frequency		

Test Condition in Charging Mode

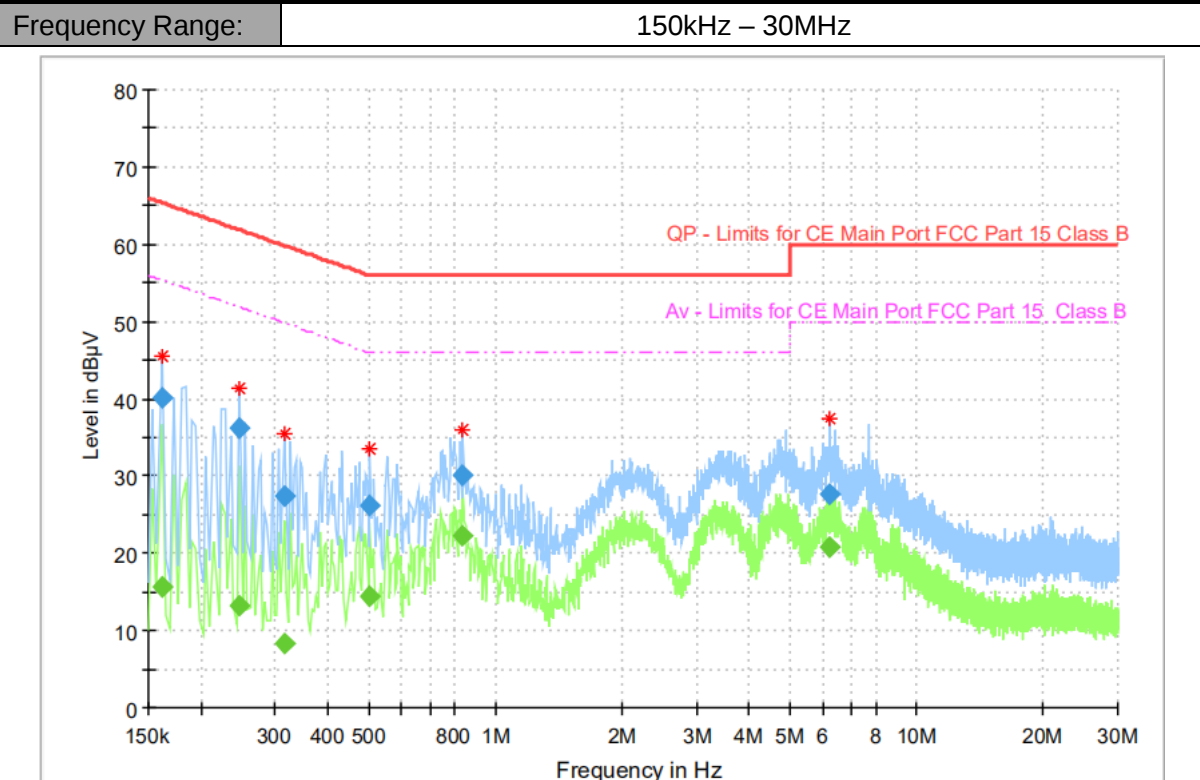
Voltage (V)	Frequency (Hz)	RBW	Sweep Time (s)
120	60	9 kHz	Auto

Uncertainty Measurement

The measurement uncertainty is 3.58dB (k=2).

Test Results

Mode 1: Adapter charging mode <Figure 1>



Frequency (MHz)	QuasiPeak (dB μ V)	Average (dB μ V)	Limit (dB μ V)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.161194	---	15.66	55.40	39.75	15000.	9.000	L1	ON	9.6
0.161194	40.00	---	65.40	25.40	15000.	9.000	L1	ON	9.6
0.247013	---	13.27	51.86	38.59	15000.	9.000	N	ON	9.7
0.247013	36.26	---	61.86	25.59	15000.	9.000	N	ON	9.7
0.314175	27.29	---	59.86	32.57	15000.	9.000	N	ON	9.7
0.314175	---	8.27	49.86	41.59	15000.	9.000	N	ON	9.7
0.504469	26.12	---	56.00	29.88	15000.	9.000	L1	ON	9.6
0.504469	---	14.54	46.00	31.46	15000.	9.000	L1	ON	9.6
0.836550	---	22.17	46.00	23.83	15000.	9.000	L1	ON	9.6
0.836550	30.18	---	56.00	25.82	15000.	9.000	L1	ON	9.6
6.220744	---	20.71	50.00	29.29	15000.	9.000	L1	ON	9.8
6.220744	27.68	---	60.00	32.32	15000.	9.000	L1	ON	9.8

Note:

1. Emission level (quasi-peak or Average peak) = Raw value by receiver + Corr (Insertion loss + cable loss)
2. The raw value is used to calculate by software which is not shown in the sheet.
3. Margin = limit value – emission level.
4. L1 and N line is all have been tested, the result of them is synthesized in the above data diagram.

7. Test Equipment Utilized

7.1 Radiated Emission Equipment list

Item	Instrument Name	Type	Serial Number	Manufacturer	Cal. Date	Cal. interval
1	Universal Radio Communication Tester	CMU200	123126	R&S	2020-05-10	1 year
2	Universal Radio Communication Tester	CMW500	104178	R&S	2020-05-10	1 year
3	Test Receiver	ESU40	100307	R&S	2020-05-10	1 year
4	Trilog Antenna	VULB9163	VULB9163-515	Schwarzbeck	2020-02-28	2 years
5	Double Ridged Guide	ETS-3117	00135890	ETS	2020-02-28	2 years
6	EMI Test Software	EMC32 V9.15	NA	R&S	NA	NA

7.2 AC Conducted Emission Equipment list

Item	Instrument Name	Type	Serial Number	Manufacturer	Cal. Date	Cal. interval
1	Universal Radio Communication Tester	CMU200	123123	R&S	2020-05-10	1 year
2	Universal Radio Communication Tester	CMW500	104178	R&S	2020-05-10	1 year
3	Test Receiver	ESCI	101235	R&S	2020-05-10	1 year
4	2-Line V-Network	ENV216	101380	R&S	2020-03-17	1 year
5	EMI Test Software	EMC32 V10.35.02	NA	R&S	NA	NA

Annex A: 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 February 28, 2021
Revised December 18, 2020

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

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