TEST REPORT

Report Number: C21T00056-EMC01-V02

Applicant	Toast, Incorporated
Product Name	Data Processing machine
Model Name	TT204W，TT204，TT202W，TT203，TK200，TT203W
Brand Name	Toast
FCC ID	2AMNG-TT200B
IC ID	23177-TT200B

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, ICES-003 Issue 7.

Prepared by		Reviewed by	
Approved by		Issue Date	2021-08-18

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.

Test Laboratory:
Industrial Internet Innovation Center (Shanghai) Co., Ltd.
Add: Building 4, No. 766 Jingang Rd, Pudong, Shanghai, China
Tel: +86 21 68866880

Revision Version

Report Number	Revision	Date	Memo
C21T00056-EMC01-V00	00	2021-07-27	Initial creation of test report
C21T00056-EMC01-V01	01	2021-08-07	Secondary creation of test report
C21T00056-EMC01-V02	02	2021-08-18	Thirdly creation of test report

CONTENTS

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
IC designation No.	CN0067

Subcontracting Lab #1:

Company Name	N/A
Address	N/A

1.2. Testing Environment

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

1.3. Project Information

Project Leader	Lu Fang
Testing Start Date	2021-05-31
Testing End Date	2021-07-08

2. Client Information

2.1. Applicant Information

Company Name	Toast, Incorporated
Address	401 Park Drive, Suite 801, Boston, MA 02215, USA
Telephone	5625462272

2.2. Manufacturer Information

Company Name	Toast, Incorporated
Address	401 Park Drive, Suite 801, Boston, MA 02215, USA
Telephone	5625462272

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

3.1. About EUT

Product Name	Data Processing machine
Model name	TT204W，TT204，TT202W，TT203，TK200，TT203W
Supported Radio Technology and Bands	BT4.2 WLAN 802.11b,g,n WLAN 802.11a,n,ac
Hardware Version	CT541MB80C 20210226
Software Version	Sunmi-ct541-v2.1.59p69

Note: Photographs of EUT are shown in ANNEX B of this test report.

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of Receipt
N02 (Mainly Supply)	N/A	CT541MB80C 20210226	Sunmi-ct541-v2.1.59p69	2021/5/31
N01 (Secondary Supply)	N/A	CT541MB80C 20210226	Sunmi-ct541-v2.1.59p69	2021/5/31
N03 (Thirdly Supply)	N/A	CT541MB80C 20210226	Sunmi-ct541-v2.1.59p69	2021/5/31

*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
CA01	Adapter	SOY-2400400	N/A
CB02	Adapter	WTA96-2400400-T	N/A
UA01	Adapter Cable	N/A	N/A
UB02	Adapter Cable	N/A	N/A
UC01	LAN Cable	N/A	N/A
AE1	USB Cable	N/A	N/A
AE2	Mouse	MS111-P	CN-011D3V-71581-19J-1A64
AE3	U-disk	DataTraveler 100 G3 64GB	N/A
AE4	Notebook PC	DELL Latitude E6510	N/A
AE5	Y-Cable	N/A	N/A
AE6	Mobile Phone	Mi 10	N/A

AE7	Ethernet Poe switch	TL-SF1005P	N/A
AE8	Ethernet Poe switch Adapter	T535113-2X1	N/A

*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 Part 15, Subpart B	Radio frequency devices	2020/10/1
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
ICES-003	Information Technology Equipment(Including Digital Apparatus)-Limits and Methods of Measurement	Issue 7

5. Test Summary

5.1. Summary of Test Results

Items	Test List	Standard	Verdict
1	Radiated Emission	15.109(a)	Pass
2	AC Conducted Emission	15.107(a)	Pass

5.2. Statements

The TT204W，TT204，TT202W，TT203，TK200，TT203W, manufactured by Toast, Incorporated 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.

The description of the differences between the models is updated as follows:

Mainly Supply	TT204	Main LCD panel Terminal + Sub LCD panel Terminal + Attached base support
	TT204W	The same with TT204, just the color is White
Secondary Supply	TT203	Main LCD panel Terminal + Attached base support
	TT202W, TT203W	The same with TT203, just the color is White
Thirdly Supply	TK200	Main LCD panel Terminal + Add POE module + Add one speaker

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:

N02 (Mainly Supply):

Test Item	Test setup and operating modes
Radiated emission	Mode 1: Full system mode+ Big screen Camera+ CA01+ UA01+ UC01+ AE1+ AE2+ AE3+ AE4 Mode 2: Full system mode+ Small screen Camera+ CA01+ UA01+ UC01+ AE1+ AE2+ AE3+ AE4 Mode 3: Full system mode+ Big screen Camera+ CB02+ UB02+ UC01+ AE1+ AE2+ AE3+ AE4 Mode 4: Full system mode+ Small screen Camera+ CB02+ UB02+ UC01+ AE1+ AE2+ AE3+ AE4 Mode 5: 2.4G WLAN mode+ CA01+ UA01 Mode 6: 5G WLAN mode+ CA01+ UA01 Mode 7: 5.8G WLAN mode+ CA01+ UA01 Mode 8: BT mode + CA01+ UA01 Mode 9: BLE mode + CA01+ UA01
AC Conducted Emission	Mode 1: Full system mode+ Big screen Camera+ CA01+ UA01+ UC01+ AE1+ AE2+ AE3+ AE4 Mode 2: Full system mode+ Small screen Camera+ CA01+ UA01+ UC01+ AE1+ AE2+ AE3+ AE4 Mode 3: Full system mode+ Big screen Camera+ CB02+ UB02+ UC01+ AE1+ AE2+ AE3+ AE4 Mode 4: Full system mode+ Small screen Camera+ CB02+ UB02+ UC01+ AE1+ AE2+ AE3+ AE4 Mode 5: 2.4G WLAN mode+ CA01+ UA01 Mode 6: 5G WLAN mode+ CA01+ UA01 Mode 7: 5.8G WLAN mode+ CA01+ UA01 Mode 8: BT mode + CA01+ UA01 Mode 9: BLE mode + CA01+ UA01

N01 (Secondary Supply):

Test Item	Test setup and operating modes
Radiated emission	Mode 1: Full system mode+ Big screen Camera+ CA01+ UA01+ UC01+ AE1+ AE2+ AE3+ AE4 Mode 3: Full system mode+ Big screen Camera+ CB02+ UB02+ UC01+ AE1+ AE2+ AE3+ AE4
AC Conducted Emission	Mode 1: Full system mode+ Big screen Camera+ CA01+ UA01+ UC01+ AE1+ AE2+ AE3+ AE4 Mode 3: Full system mode+ Big screen Camera+ CB02+ UB02+ UC01+ AE1+ AE2+ AE3+ AE4

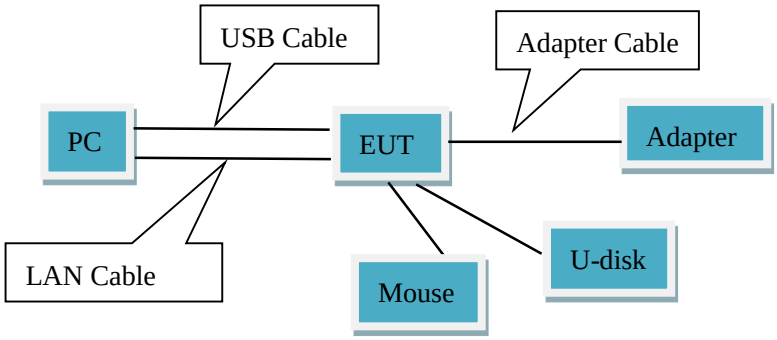
N03 (Thirdly Supply):

Test Item	Test setup and operating modes
Radiated emission	Mode 10: Full system mode+ Big screen Camera+ CA01+ UA01+ UC01+ AE1+ AE2+ AE3+ AE4+ AE5+ AE6 Mode 3: Full system mode+ Big screen Camera+ CB02+ UB02+ UC01+ AE1+ AE2+ AE3+ AE4 Mode 11: POE mode+ AE7+ AE8
AC Conducted Emission	Mode 10: Full system mode+ Big screen Camera+ CA01+ UA01+ UC01+ AE1+ AE2+ AE3+ AE4+ AE5+ AE6 Mode 3: Full system mode+ Big screen Camera+ CB02+ UB02+ UC01+ AE1+ AE2+ AE3+ AE4

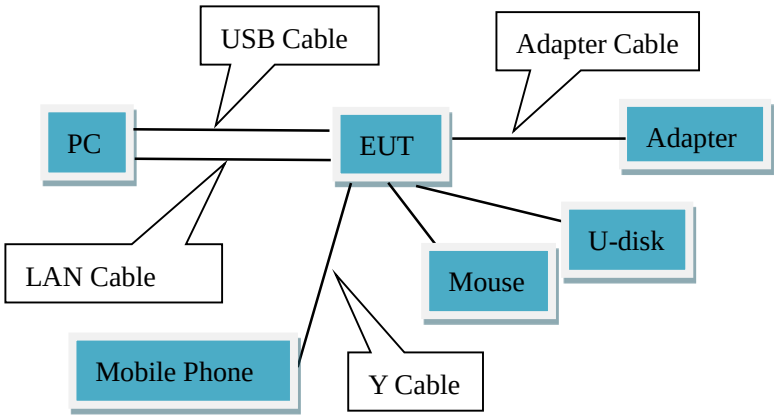
5.4. EUT System Operation

1. Connect the EUT with AE.
2. Setup the EUT according to the standard.
3. Full system mode: Data application transferred mode between EUT and PC through USB Cable and Ping mode between EUT and PC through LAN Cable.
4. BT/BLE/2.4G WLAN/5G WLAN/5.8G WLAN mode: Through the adb instructions make the EUT transmit signal.
5. Start testing and monitoring the function

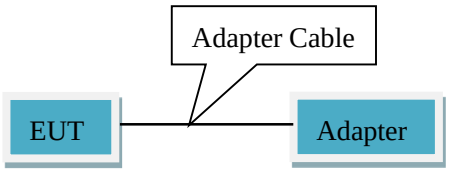
5.5. EUT Connection Diagram of Test System



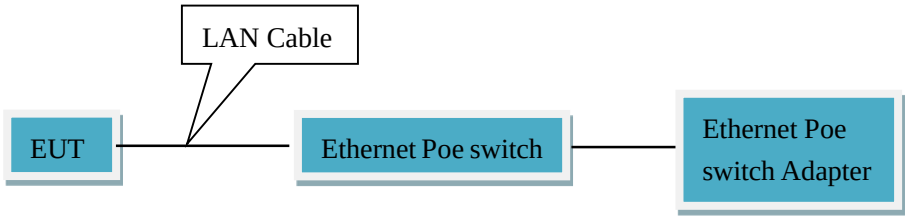
<Figure 1> Mode 1-4



<Figure 2> Mode 10



<Figure 3> Mode 5-9



<Figure 4> Mode 11

6. Measurement Results

6.1. Radiated Emission

Method of Measurement

a. 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.

b. 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

Table 1:

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

Table 2:

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

Table 3:

Test conditions

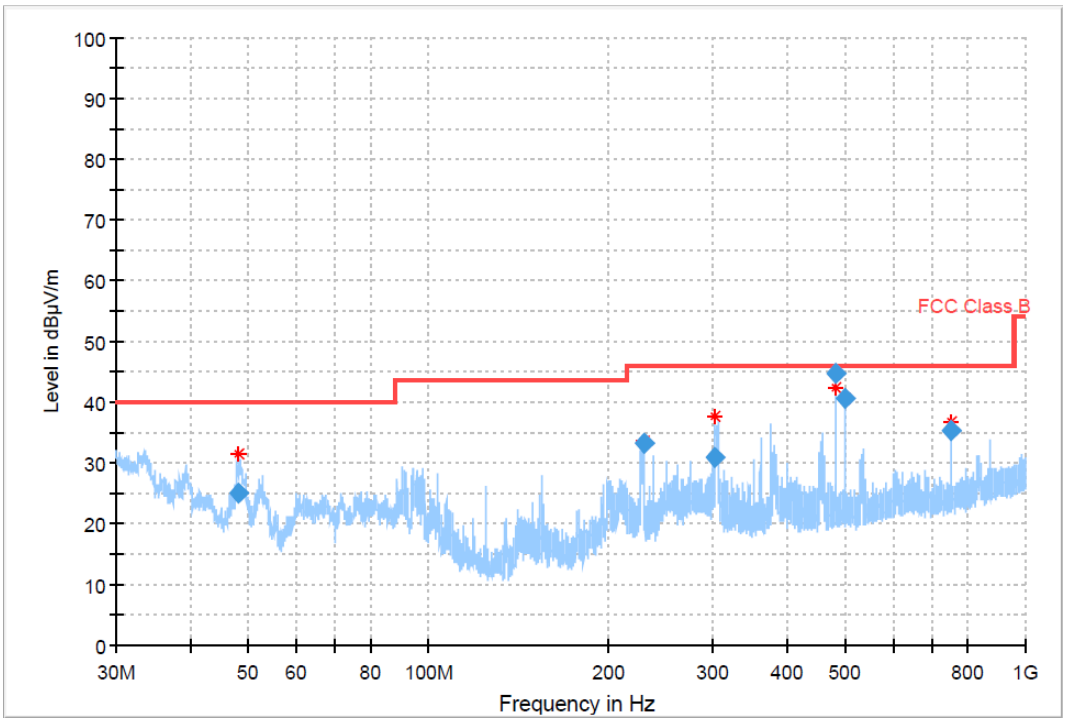
Frequency Range (MHz)	RBW/VBW	Sweep Time (s)
30-1000	120kHz/300kHz	Auto
1000-18000	1MHz/3MHz	Auto

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.

N02 (Mainly Supply):

Mode 4: Full system mode+ Small screen Camera+ CB02+ UB02+ UC01+ AE1+ AE2+ AE3+ AE4 (30M-1GHz)



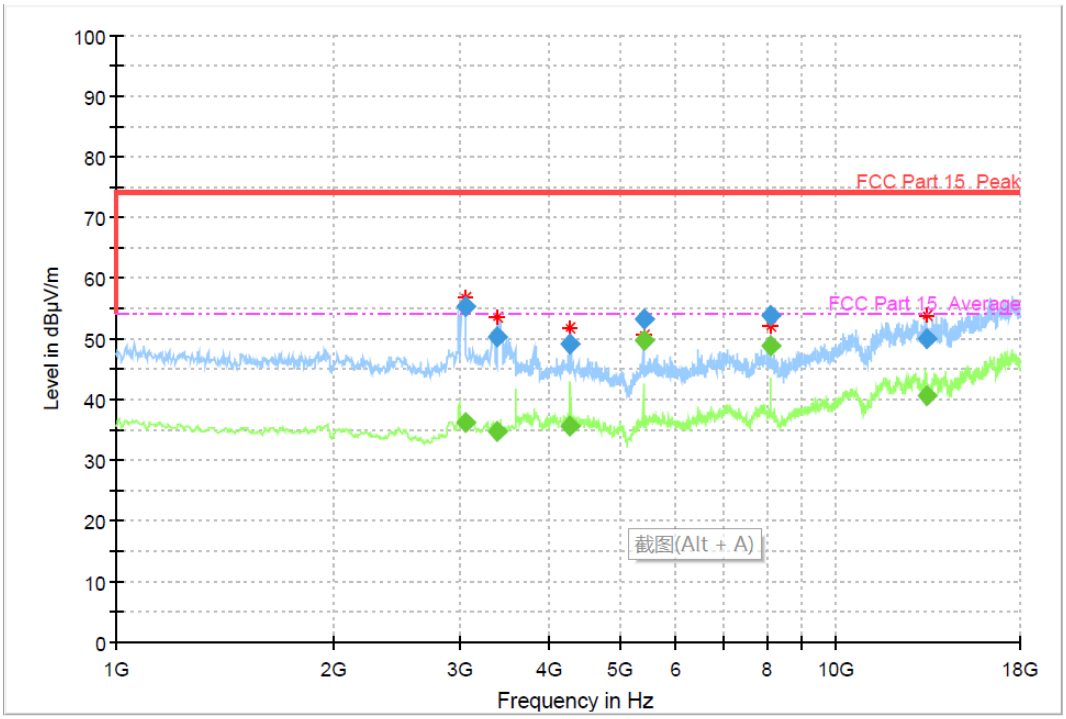
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
48.322139	24.87	40.00	15.13	1000.0	120.000	100.0	V	27.0	-12.2
229.562248	33.34	46.00	12.66	1000.0	120.000	125.0	H	240.0	-12.9
301.841317	30.89	46.00	15.11	1000.0	120.000	121.0	H	66.0	-10.9
479.974672	44.74	46.00	1.26	1000.0	120.000	175.0	V	227.0	-7.1
499.990669	40.71	46.00	5.29	1000.0	120.000	105.0	V	-2.0	-6.7
750.002851	35.38	46.00	10.62	1000.0	120.000	100.0	V	120.0	-2.6

Note:

1. Emission level(QP)=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.

Mode 4: Full system mode+ Small screen Camera+ CB02+ UB02+ UC01+ AE1+ AE2+ AE3+ AE4 (1GHz –18GHz)

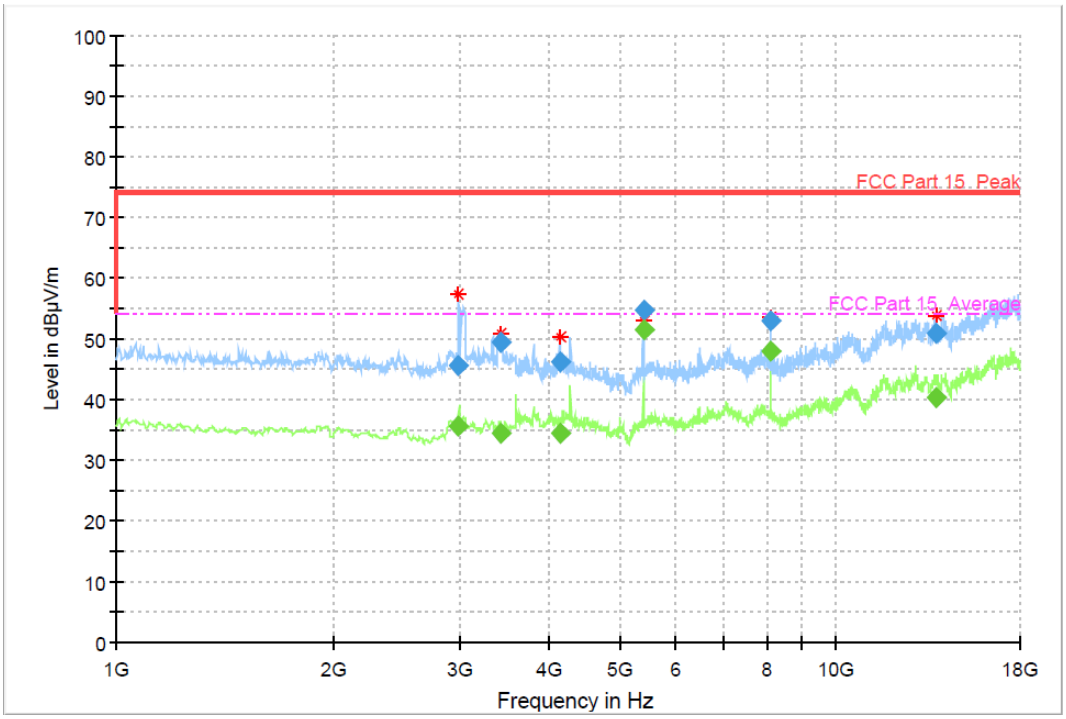


Final Result 1

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Band width (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
3063.80000	55.27	---	74.00	18.73	1.0	1000.	200.0	H	208.0	0.7
3063.80000	---	36.19	54.00	17.81	1.0	1000.	200.0	H	208.0	0.7
3394.20000	---	34.64	54.00	19.36	1.0	1000.	200.0	H	189.0	0.8
3394.20000	50.36	---	74.00	23.64	1.0	1000.	200.0	H	189.0	0.8
4276.80000	49.18	---	74.00	24.82	1.0	1000.	100.0	H	204.0	1.0
4276.80000	---	35.60	54.00	18.40	1.0	1000.	100.0	H	204.0	1.0
5399.80000	---	49.67	54.00	4.33	1.0	1000.	200.0	H	189.0	2.0
5399.80000	53.15	---	74.00	20.85	1.0	1000.	200.0	H	189.0	2.0
8100.00000	53.80	---	74.00	20.20	1.0	1000.	100.0	H	195.0	4.3
8100.00000	---	48.96	54.00	5.04	1.0	1000.	100.0	H	195.0	4.3
13389.4000	50.12	---	74.00	23.88	1.0	1000.	100.0	H	137.0	11.4
13389.4000	---	40.49	54.00	13.51	1.0	1000.	100.0	H	137.0	11.4

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.



Final Result 1

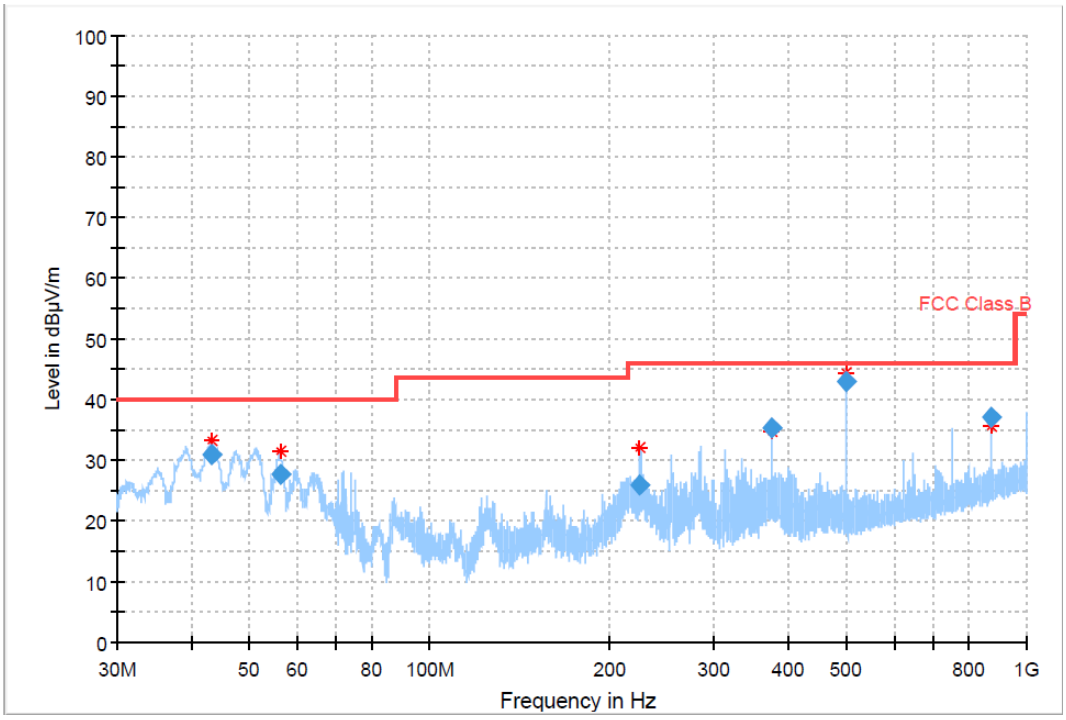
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Band width (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
2986.60000	45.64	---	74.00	28.36	1.0	1000.	100.0	V	106.0	1.9
2986.60000	---	35.64	54.00	18.36	1.0	1000.	100.0	V	106.0	1.9
3417.20000	---	34.30	54.00	19.70	1.0	1000.	100.0	V	106.0	0.7
3417.20000	49.42	---	74.00	24.58	1.0	1000.	100.0	V	106.0	0.7
4132.20000	46.11	---	74.00	27.89	1.0	1000.	100.0	V	140.0	1.1
4132.20000	---	34.37	54.00	19.63	1.0	1000.	100.0	V	140.0	1.1
5400.00000	54.64	---	74.00	19.36	1.0	1000.	200.0	V	198.0	2.0
5400.00000	---	51.38	54.00	2.62	1.0	1000.	200.0	V	198.0	2.0
8099.80000	---	47.84	54.00	6.16	1.0	1000.	200.0	V	164.0	4.3
8099.80000	53.01	---	74.00	20.99	1.0	1000.	200.0	V	164.0	4.3
13774.4000	50.82	---	74.00	23.18	1.0	1000.	100.0	V	30.0	11.7
13774.4000	---	40.34	54.00	13.66	1.0	1000.	100.0	V	30.0	11.7

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.

N01 (Secondary Supply):

Mode 1: Full system mode+ Big screen Camera+ CA01+ UA01+ UC01+ AE1+ AE2+ AE3+ AE4 (30M-1GHz)



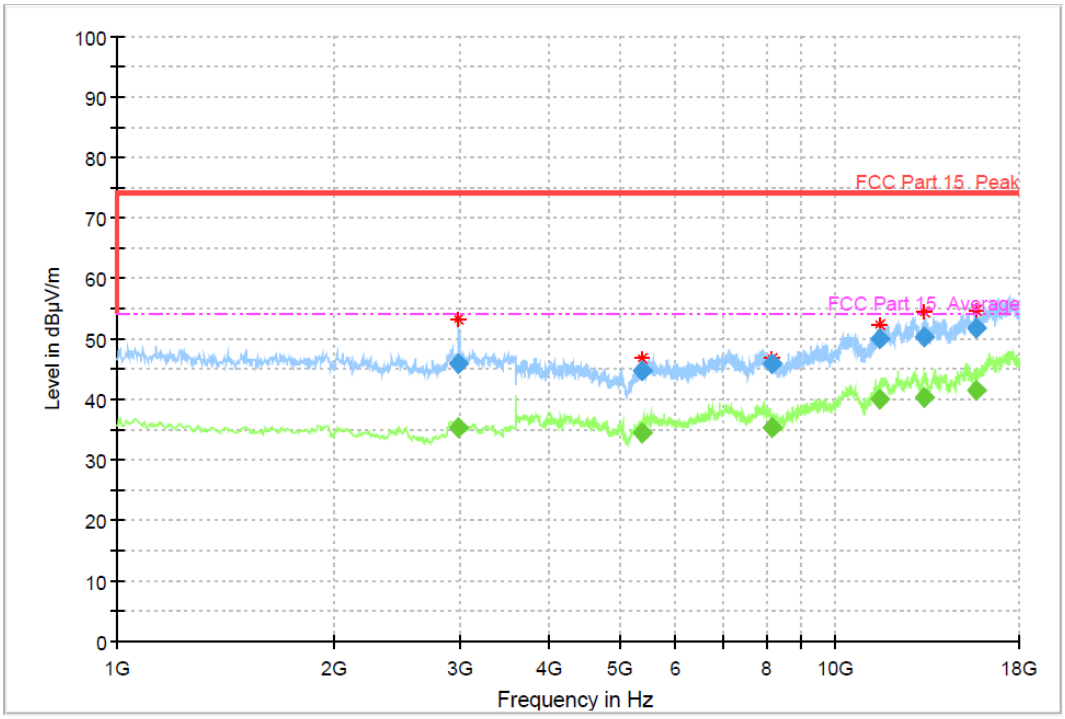
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
43.334963	30.94	40.00	9.06	1000.0	120.000	100.0	V	349.0	-16.0
56.400259	27.74	40.00	12.26	1000.0	120.000	181.3	V	65.0	-16.0
225.692123	25.87	46.00	20.13	1000.0	120.000	125.0	H	193.0	-14.7
374.976691	35.32	46.00	10.68	1000.0	120.000	100.0	H	-6.0	-10.6
499.989069	43.01	46.00	2.99	1000.0	120.000	100.0	H	-3.0	-8.0
875.006013	36.98	46.00	9.02	1000.0	120.000	100.0	H	30.0	-1.5

Note:

1. Emission level(QP)=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.

Mode 3: Full system mode+ Big screen Camera+ CB02+ UB02+ UC01+ AE1+ AE2+ AE3+ AE4 (1GHz –18GHz)

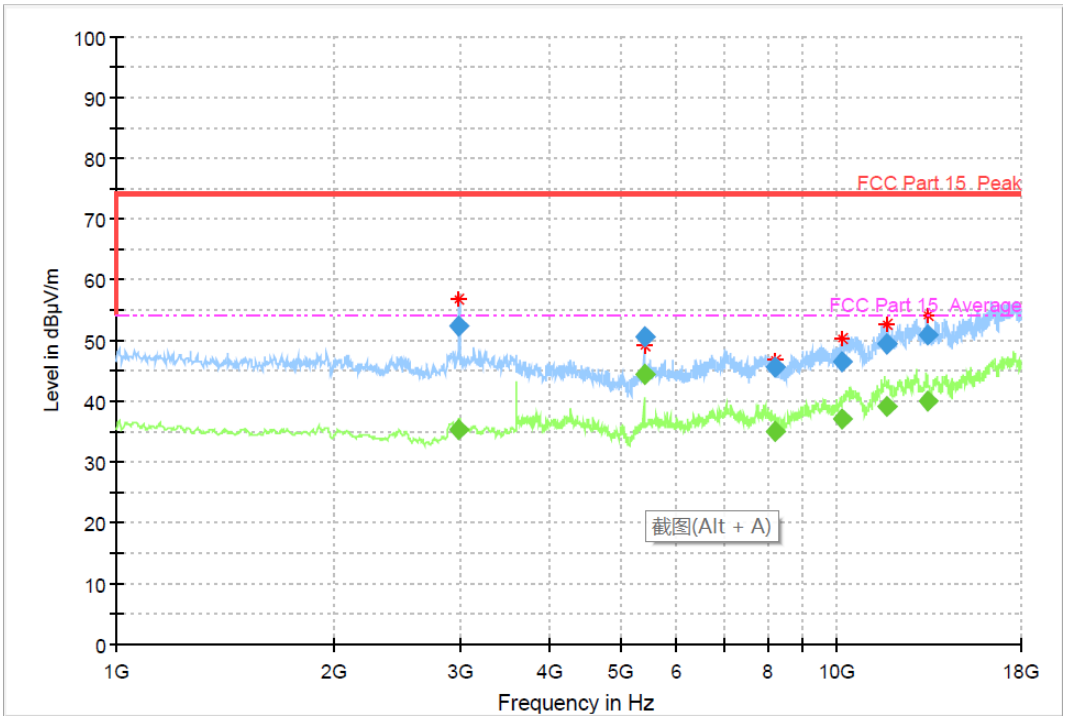


Final Result 1

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Band width (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
2991.80000	45.92	---	74.00	28.08	1.0	1000.	200.0	H	217.0	1.8
2991.80000	---	35.24	54.00	18.76	1.0	1000.	200.0	H	217.0	1.8
5375.20000	44.75	---	74.00	29.25	1.0	1000.	200.0	H	242.0	2.0
5375.20000	---	34.31	54.00	19.69	1.0	1000.	200.0	H	242.0	2.0
8164.60000	---	35.29	54.00	18.71	1.0	1000.	200.0	H	302.0	4.1
8164.60000	45.96	---	74.00	28.04	1.0	1000.	200.0	H	302.0	4.1
11556.6000	---	39.96	54.00	14.04	1.0	1000.	200.0	H	45.0	9.7
11556.6000	49.98	---	74.00	24.02	1.0	1000.	200.0	H	45.0	9.7
13283.6000	50.34	---	74.00	23.66	1.0	1000.	100.0	H	52.0	11.2
13283.6000	---	40.32	54.00	13.68	1.0	1000.	100.0	H	52.0	11.2
15677.2000	51.87	---	74.00	22.13	1.0	1000.	200.0	H	285.0	14.6
15677.2000	---	41.56	54.00	12.44	1.0	1000.	200.0	H	285.0	14.6

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 1

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Band width (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
2992.80000	---	35.24	54.00	18.76	1.0	1000.	200.0	V	90.0	1.8
2992.80000	52.38	---	74.00	21.62	1.0	1000.	200.0	V	90.0	1.8
5399.60000	---	44.40	54.00	9.60	1.0	1000.	200.0	V	322.0	2.0
5399.60000	50.47	---	74.00	23.53	1.0	1000.	200.0	V	322.0	2.0
8227.80000	---	34.91	54.00	19.09	1.0	1000.	200.0	V	72.0	3.9
8227.80000	45.69	---	74.00	28.31	1.0	1000.	200.0	V	72.0	3.9
10166.4000	46.52	---	74.00	27.48	1.0	1000.	100.0	V	39.0	6.8
10166.4000	---	37.12	54.00	16.88	1.0	1000.	100.0	V	39.0	6.8
11713.6000	---	39.26	54.00	14.74	1.0	1000.	100.0	V	241.0	10.0
11713.6000	49.36	---	74.00	24.64	1.0	1000.	100.0	V	241.0	10.0
13349.2000	50.78	---	74.00	23.22	1.0	1000.	100.0	V	13.0	11.3
13349.2000	---	40.05	54.00	13.95	1.0	1000.	100.0	V	13.0	11.3

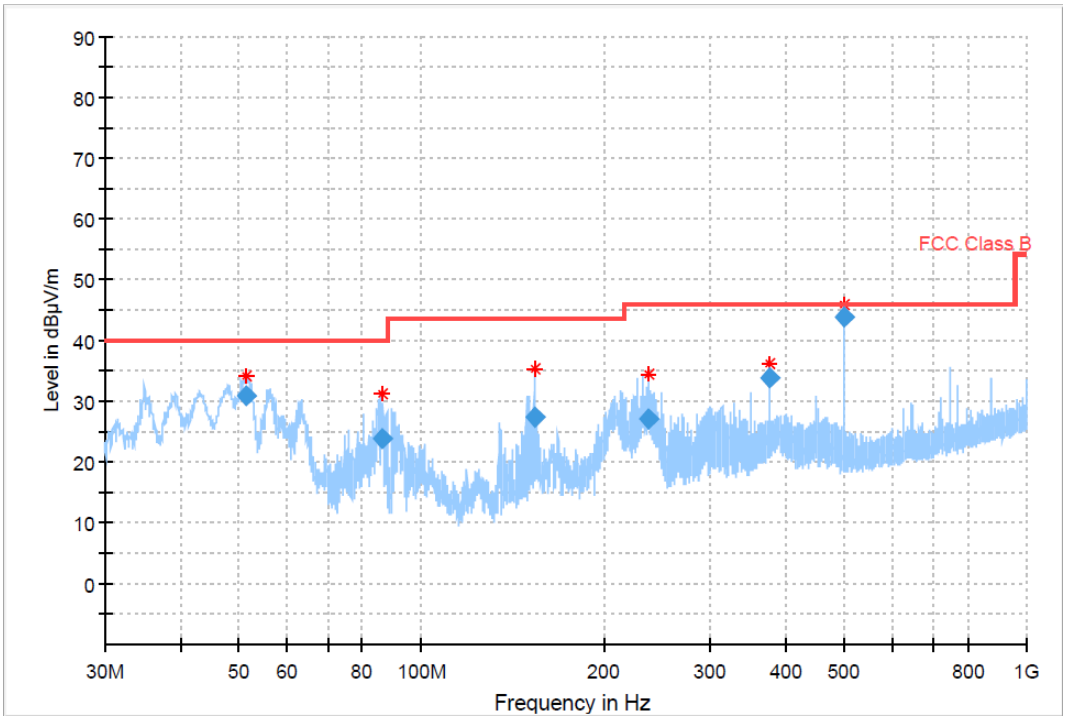
Note:

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.

N03 (Thirdly Supply):

Mode 10: Full system mode+ Big screen Camera+ CA01+ UA01+ UC01+ AE1+ AE2+ AE3+ AE4+ AE5+ AE6

(30M-1GHz)



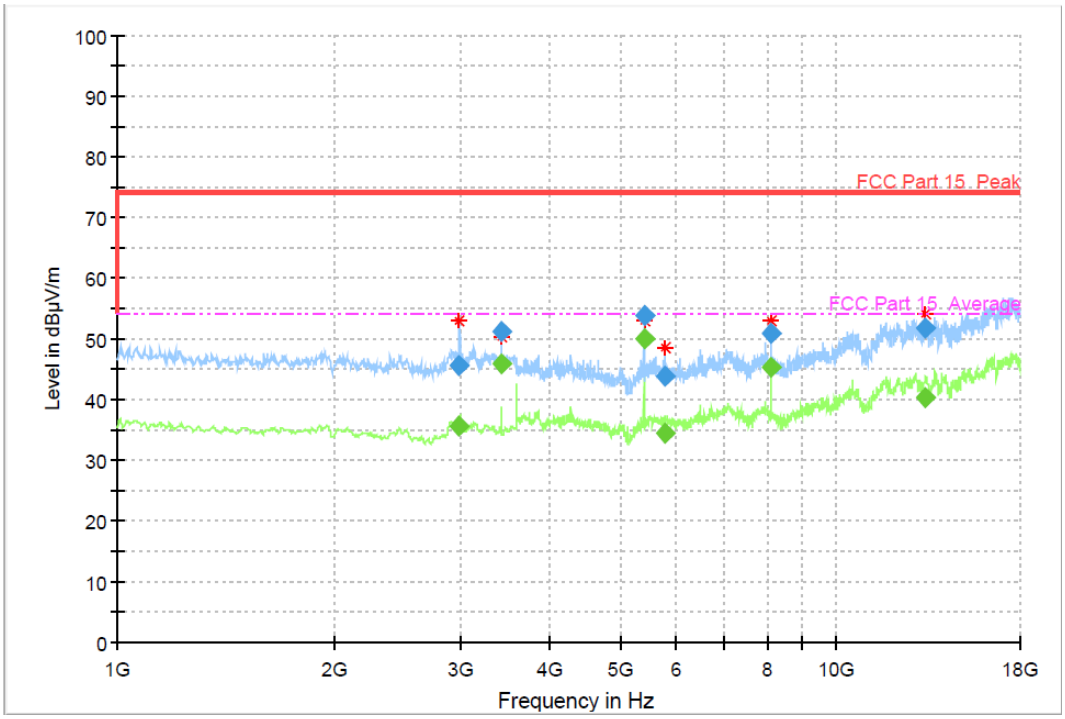
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
51.465832	30.98	40.00	9.02	1000.0	120.000	175.0	V	85.0	-15.4
85.912413	23.84	40.00	16.16	1000.0	120.000	209.3	H	23.0	-19.3
153.738792	27.36	43.50	16.14	1000.0	120.000	195.1	H	134.0	-19.1
237.670515	26.98	46.00	19.02	1000.0	120.000	175.1	H	92.0	-14.3
375.041355	33.97	46.00	12.03	1000.0	120.000	100.0	H	72.0	-10.6
500.006741	43.83	46.00	2.17	1000.0	120.000	100.0	V	-17.0	-8.0

Note:

1. Emission level(QP)=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.

Mode 3: Fullsystem mode+ Big screen Camera+ CB02+ UB02+ UC01+ AE1+ AE2+ AE3+ AE4 (1GHz –18GHz)

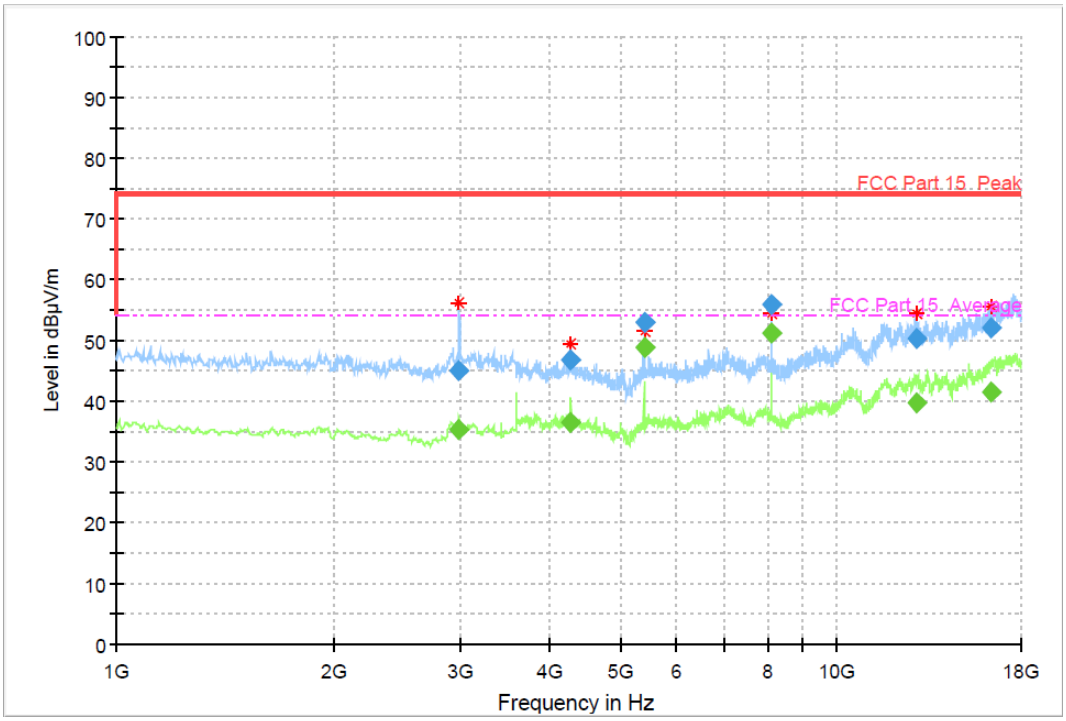


Final Result 1

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Band width (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
2995.20000	45.62	---	74.00	28.38	1.0	1000.	100.0	H	158.0	1.7
2995.20000	---	35.60	54.00	18.40	1.0	1000.	100.0	H	158.0	1.7
3423.80000	---	45.86	54.00	8.14	1.0	1000.	100.0	H	174.0	0.5
3423.80000	51.09	---	74.00	22.91	1.0	1000.	100.0	H	174.0	0.5
5400.00000	---	50.13	54.00	3.87	1.0	1000.	100.0	H	158.0	2.0
5400.00000	53.80	---	74.00	20.20	1.0	1000.	100.0	H	158.0	2.0
5780.80000	---	34.52	54.00	19.48	1.0	1000.	200.0	H	0.0	2.2
5780.80000	43.81	---	74.00	30.19	1.0	1000.	200.0	H	0.0	2.2
8100.00000	51.01	---	74.00	22.99	1.0	1000.	200.0	H	185.0	4.3
8100.00000	---	45.26	54.00	8.74	1.0	1000.	200.0	H	185.0	4.3
13284.8000	---	40.15	54.00	13.85	1.0	1000.	200.0	H	167.0	11.2
13284.8000	51.67	---	74.00	22.33	1.0	1000.	200.0	H	167.0	11.2

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 1

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Band width (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
2988.60000	---	35.41	54.00	18.59	1.0	1000.	200.0	V	217.0	1.9
2988.60000	44.99	---	74.00	29.01	1.0	1000.	200.0	V	217.0	1.9
4277.40000	---	36.36	54.00	17.64	1.0	1000.	100.0	V	177.0	1.0
4277.40000	46.87	---	74.00	27.13	1.0	1000.	100.0	V	177.0	1.0
5400.00000	52.96	---	74.00	21.04	1.0	1000.	200.0	V	165.0	2.0
5400.00000	---	48.79	54.00	5.21	1.0	1000.	200.0	V	165.0	2.0
8099.60000	55.75	---	74.00	18.25	1.0	1000.	100.0	V	177.0	4.3
8099.60000	---	51.20	54.00	2.80	1.0	1000.	100.0	V	177.0	4.3
12867.0000	50.44	---	74.00	23.56	1.0	1000.	200.0	V	334.0	11.2
12867.0000	---	39.67	54.00	14.33	1.0	1000.	200.0	V	334.0	11.2
16319.8000	51.92	---	74.00	22.08	1.0	1000.	200.0	V	257.0	16.2
16319.8000	---	41.39	54.00	12.61	1.0	1000.	200.0	V	257.0	16.2

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 AC 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		

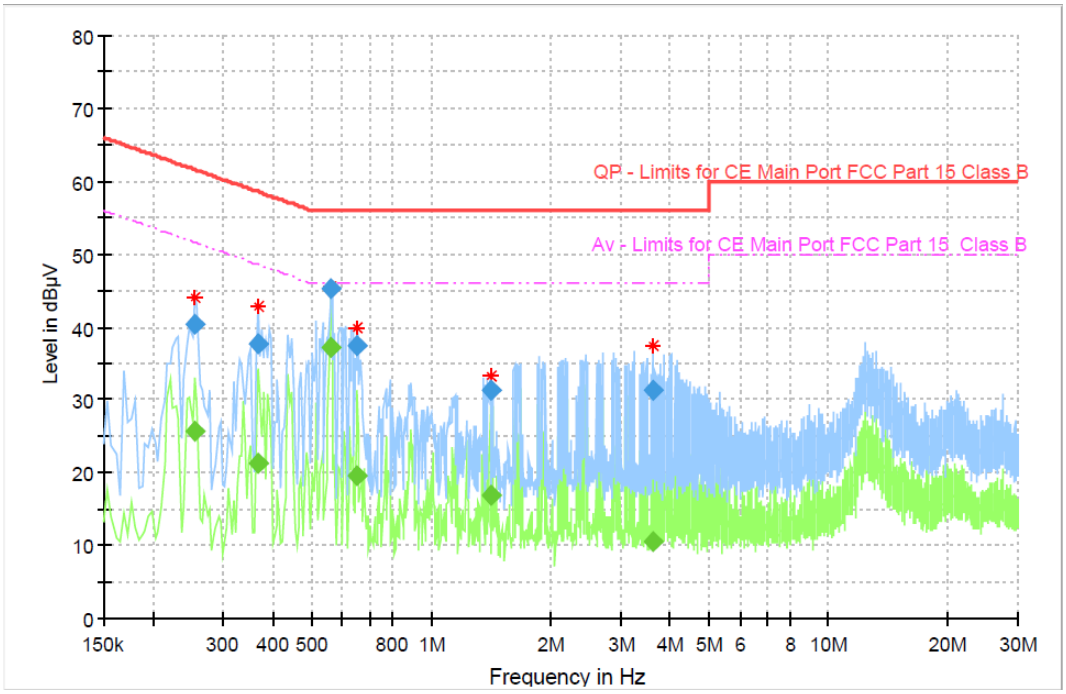
Test Condition in Charging Mode

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

Test Results

N02 (Mainly Supply):

Mode 4: Full system mode+ Small screen Camera+ CB02+ UB02+ UC01+ AE1+ AE2+ AE3+ AE4



Final Result 1

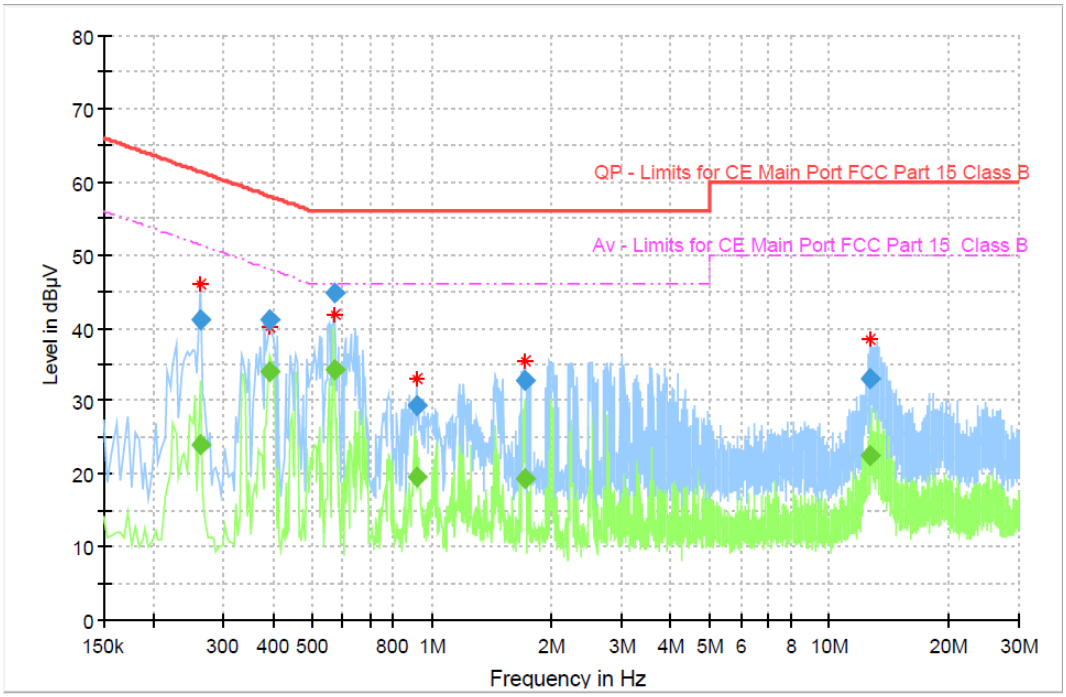
Frequency (MHz)	QuasiPeak (dB µ V)	Average (dB µ V)	Limit (dB µ V)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.254475	---	25.76	51.61	25.85	15000.0	9.000	L1	ON	9.8
0.254475	40.41	---	61.61	21.20	15000.0	9.000	L1	ON	9.8
0.366413	---	21.32	48.58	27.27	15000.0	9.000	L1	ON	9.8
0.366413	37.60	---	58.58	20.98	15000.0	9.000	L1	ON	9.8
0.560438	---	37.08	46.00	8.92	15000.0	9.000	L1	ON	9.9
0.560438	45.32	---	56.00	10.68	15000.0	9.000	L1	ON	9.9
0.653719	---	19.69	46.00	26.31	15000.0	9.000	L1	ON	10.0
0.653719	37.42	---	56.00	18.58	15000.0	9.000	L1	ON	10.0
1.411163	---	16.96	46.00	29.04	15000.0	9.000	L1	ON	10.2
1.411163	31.40	---	56.00	24.60	15000.0	9.000	L1	ON	10.2
3.601406	---	10.43	46.00	35.57	15000.0	9.000	L1	ON	10.4
3.601406	31.39	---	56.00	24.61	15000.0	9.000	L1	ON	10.4

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.

N01 (Secondary Supply):

Mode 3: Full system mode+ Big screen Camera+ CB02+ UB02+ UC01+ AE1+ AE2+ AE3+ AE4



Final Result 1

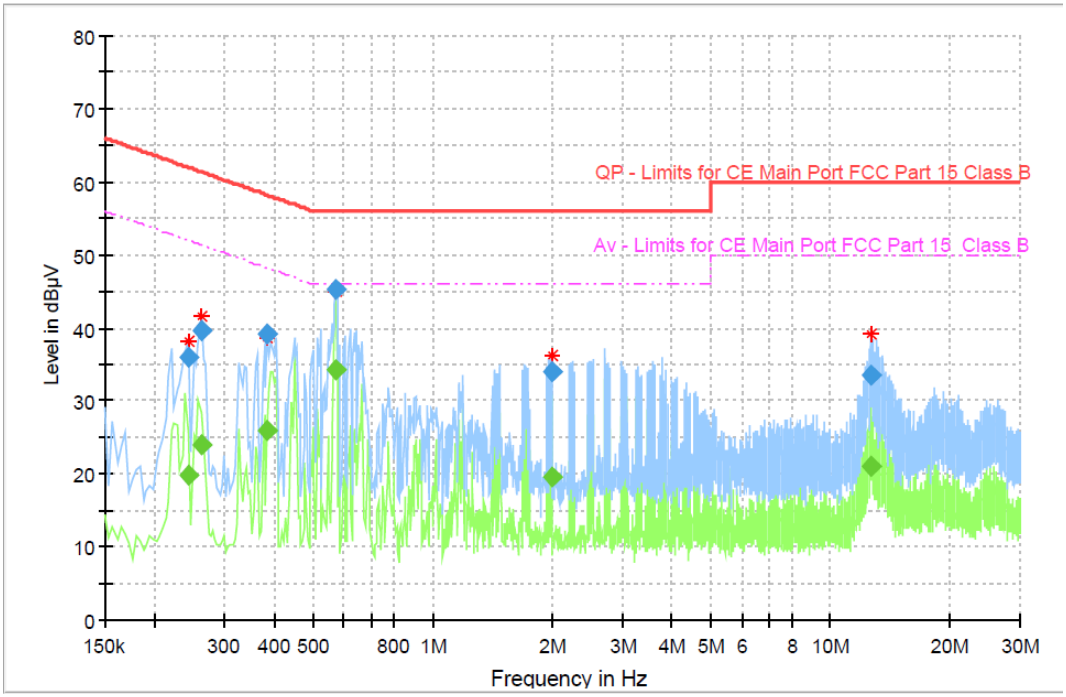
Frequency (MHz)	QuasiPeak (dB µ V)	Average (dB µ V)	Limit (dB µ V)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.261938	---	23.93	51.37	27.44	15000.0	9.000	L1	ON	9.8
0.261938	41.03	---	61.37	20.34	15000.0	9.000	L1	ON	9.8
0.392531	---	33.89	48.01	14.12	15000.0	9.000	L1	ON	9.8
0.392531	41.13	---	58.01	16.88	15000.0	9.000	L1	ON	9.8
0.571631	---	34.16	46.00	11.84	15000.0	9.000	L1	ON	9.9
0.571631	44.67	---	56.00	11.33	15000.0	9.000	L1	ON	9.9
0.914906	---	19.61	46.00	26.39	15000.0	9.000	L1	ON	10.1
0.914906	29.30	---	56.00	26.70	15000.0	9.000	L1	ON	10.1
1.724588	---	19.44	46.00	26.56	15000.0	9.000	L1	ON	10.2
1.724588	32.76	---	56.00	23.24	15000.0	9.000	L1	ON	10.2
12.720581	---	22.48	50.00	27.52	15000.0	9.000	L1	ON	10.9
12.720581	32.92	---	60.00	27.08	15000.0	9.000	L1	ON	10.9

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.

N03 (Thirdly Supply):

Mode 3: Full system mode+ Big screen Camera+ CB02+ UB02+ UC01+ AE1+ AE2+ AE3+ AE4



Final Result 1

Frequency (MHz)	QuasiPeak (dB µ V)	Average (dB µ V)	Limit (dB µ V)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.243281	---	19.76	51.98	32.22	15000.0	9.000	L1	ON	9.8
0.243281	35.95	---	61.98	26.03	15000.0	9.000	L1	ON	9.8
0.261938	---	23.97	51.37	27.40	15000.0	9.000	N	ON	9.7
0.261938	39.68	---	61.37	21.69	15000.0	9.000	N	ON	9.7
0.385069	39.05	---	58.17	19.11	15000.0	9.000	L1	ON	9.8
0.385069	---	25.86	48.17	22.31	15000.0	9.000	L1	ON	9.8
0.571631	45.26	---	56.00	10.74	15000.0	9.000	L1	ON	9.9
0.571631	---	34.34	46.00	11.66	15000.0	9.000	L1	ON	9.9
1.989506	33.94	---	56.00	22.06	15000.0	9.000	L1	ON	10.3
1.989506	---	19.55	46.00	26.45	15000.0	9.000	L1	ON	10.3
12.586256	33.44	---	60.00	26.56	15000.0	9.000	L1	ON	10.9
12.586256	---	21.02	50.00	28.98	15000.0	9.000	L1	ON	10.9

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 List

7.1. Radiated Emission Equipment list

Item	Equipment Name	Type	Serial Number	Manufacturer	Cal. Date	Cal. interval
1	Test Receiver	ESU40	100307	R&S	2021-03-03	1 year
2	Trilog Antenna	VULB9163	VULB9163-515	Schwarzbeck	2021-02-03	2 years
3	Double Ridged Guide Antenna	ETS-3117	00135890	ETS	2020-02-28	2 years
4	EMI Test Software	EMC32 V9.15	N/A	R&S	N/A	N/A

7.2. AC Conducted Emission Equipment list

Item	Equipment Name	Type	Serial Number	Manufacturer	Cal. Date	Cal. interval
1	Test Receiver	ESCI	101235	R&S	2021-05-10	1 year
2	2-Line V-Network	ENV216	101380	R&S	2021-03-20	1 year
3	EMI Test Software	EMC32 V10.35.02	N/A	R&S	N/A	N/A

Annex A: Measurement Uncertain

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of *k*=2.

Case	Uncertainty
Radiated Emission 30MHz-1000MHz	4.96 dB
Radiated Emission 1000MHz-18000MHz	5.18 dB
AC Conducted Emission	3.66 dB

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 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 12th day of April 2021.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3682.01
Valid to February 28, 2023

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

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