

TEST REPORT

Product Name : Tablet pc
Brand Mark : tibuta
Model No. : E100
Extension Model : E101, E102, E103
FCC ID : 2AXUI-E100
Report Number : BLA-EMC-202106-A2602
Date of Sample Receipt : 2021/6/8
Date of Test : 2021/6/8 to 2021/7/16
Date of Issue : 2021/7/16
Test Standard : 47 CFR Part 15, Subpart C 15.247
Test Result : Pass

Prepared for:

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Date: 2021/7/16



REPORT REVISE RECORD

Version No.	Date	Description
00	2021/7/16	Original

BlueAsia

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1 TEST SUMMARY

Test item	Test Requirement	Test Method	Class/Severity	Result
Antenna Requirement	47 CFR Part 15, Subpart C 15.247	N/A	47 CFR Part 15, Subpart C 15.203 & 15.247(c)	Pass
Radiated Spurious Emissions	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.4,6.5,6.6	47 CFR Part 15, Subpart C 15.209 & 15.247(d)	Pass
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.10.5	47 CFR Part 15, Subpart C 15.209 & 15.247(d)	Pass
Conducted Spurious Emissions	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 7.8.6 & Section 11.11	47 CFR Part 15, Subpart C 15.247(d)	Pass
Conducted Band Edges Measurement	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 7.8.8 & Section 11.13.3.2	47 CFR Part 15, Subpart C 15.247(d)	Pass
Minimum 6dB Bandwidth	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 11.8.1	47 CFR Part 15, Subpart C 15.247a(2)	Pass
Conducted Peak Output Power	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 7.8.5 & Section 11.9.1	47 CFR Part 15, Subpart C 15.247(b)(1) & 15.247(b)(3)	Pass
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass
Power Spectrum Density	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 11.10.2	47 CFR Part 15, Subpart C 15.247(e)	Pass

2 GENERAL INFORMATION

Applicant	CHITECH SHENZHEN TECHNOLOGY CO.,LTD
Address	Chitech industrial Park,NO.48,Xiashijia Road,Gongming Town,Guangming New Dist.,Shenzhen,China
Manufacturer	CHITECH SHENZHEN TECHNOLOGY CO.,LTD
Address	Chitech industrial Park,NO.48,Xiashijia Road,Gongming Town,Guangming New Dist.,Shenzhen,China
Factory	CHITECH SHENZHEN TECHNOLOGY CO.,LTD
Address	Chitech industrial Park,NO.48,Xiashijia Road,Gongming Town,Guangming New Dist.,Shenzhen,China
Product Name	Tablet pc
Test Model No.	E100

3 GENERAL DESCRIPTION OF E.U.T.

Hardware Version:	863A_MB_V5.1
Software Version:	Tibuta_MasterPad-E100_20210717
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz 802.11n(HT40): 2422MHz to 2452MHz
Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Channel Spacing:	5MHz
Number of Channels:	802.11b/g/n(HT20):11 802.11n(HT40):7
Antenna Type:	Internal Antenna
Antenna Gain:	1.52dBi
Power supply:	Rechargeable Li-ion Battery DC3.7V-6000mAh
AC adapter:	Model: JK050200-S86USU Input: AC100~240V, 50/60Hz 0.5A Output: DC 5.0V=2000Ma, 10.0W

4 TEST ENVIRONMENT

Environment	Temperature	Voltage
Normal	+25°C	3.7Vdc

5 TEST MODE

TEST MODE	TEST MODE DESCRIPTION
TX	Keep the EUT in transmitting mode with modulation(Duty cycle $\geq$ 98%)
Remark:Only the data of the worst mode would be recorded in this report.	

6 MEASUREMENT UNCERTAINTY

Parameter	Expanded Uncertainty (Confidence of 95%)
Radiated Emission(9kHz-30MHz)	$\pm 4.34\text{dB}$
Radiated Emission(30Mz-1000MHz)	$\pm 4.24\text{dB}$
Radiated Emission(1GHz-18GHz)	$\pm 4.68\text{dB}$
AC Power Line Conducted Emission(150kHz-30MHz)	$\pm 3.45\text{dB}$

7 DESCRIPTION OF SUPPORT UNIT

Device Type	Manufacturer	Model Name	Serial No.	Remark
N/A	N/A	N/A	N/A	N/A

8 LABORATORY LOCATION

All tests were performed at:
BlueAsia of Technical Services(Shenzhen) Co., Ltd.
Building C, No. 107, Shihuan Road, Shiyan Sub-District, Baoan District, Shenzhen, Guangdong Province, China
Telephone: TEL: +86-755-28682673 FAX: +86-755-28682673
No tests were sub-contracted.

9 TEST INSTRUMENTS LIST

Test Equipment Of Radiated Spurious Emissions					
Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due
Chamber	SKET	966	N/A	2020/11/10	2023/11/9
Spectrum	R&S	FSP40	100817	2020/10/12	2021/10/11
Receiver	R&S	ESR7	101199	2020/10/12	2021/10/11
broadband Antenna	Schwarzbeck	VULB9168	00836 P:00227	2020/9/26	2022/9/25
Horn Antenna	Schwarzbeck	9120D	01892 P:00331	2020/9/26	2022/9/25
Amplifier	SKET	PA-000318G-45	N/A	2020/10/16	2021/10/15
EMI software	EZ	EZ-EMC	EEMC-3A1	N/A	N/A
Loop antenna	SCHNARZBECK	FMZB1519B	00102	2020/9/26	2022/9/25
Controller	SKET	N/A	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-02	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-03	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-01	N/A	N/A	N/A

Test Equipment Of Radiated Emissions which fall in the restricted bands					
Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due
Chamber	SKET	966	N/A	2020/11/10	2023/11/9
Spectrum	R&S	FSP40	100817	2020/10/12	2021/10/11
Receiver	R&S	ESR7	101199	2020/10/12	2021/10/11
broadband Antenna	Schwarzbeck	VULB9168	00836 P:00227	2020/9/26	2022/9/25
Horn Antenna	Schwarzbeck	9120D	01892 P:00331	2020/9/26	2022/9/25

Amplifier	SKET	PA-000318G-45	N/A	2020/10/16	2021/10/15
EMI software	EZ	EZ-EMC	EEMC-3A1	N/A	N/A
Loop antenna	SCHNARZBECK	FMZB1519B	00102	2020/9/26	2022/9/25
Controller	SKET	N/A	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-02	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-03	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-01	N/A	N/A	N/A

Test Equipment Of Conducted Spurious Emissions

Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due
Spectrum	R&S	FSP40	100817	2020/10/12	2021/10/11
Spectrum	Agilent	N9020A	MY49100060	2020/10/12	2021/10/11
Signal Generator	Agilent	N5182A	MY49060650	2020/10/12	2021/10/11
Signal Generator	Agilent	E8257D	MY44320250	2020/10/12	2021/10/11

Test Equipment Of Conducted Band Edges Measurement

Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due
Spectrum	R&S	FSP40	100817	2020/10/12	2021/10/11
Spectrum	Agilent	N9020A	MY49100060	2020/10/12	2021/10/11
Signal Generator	Agilent	N5182A	MY49060650	2020/10/12	2021/10/11
Signal Generator	Agilent	E8257D	MY44320250	2020/10/12	2021/10/11

Test Equipment Of Minimum 6dB Bandwidth

Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due
Spectrum	R&S	FSP40	100817	2020/10/12	2021/10/11
Spectrum	Agilent	N9020A	MY49100060	2020/10/12	2021/10/11

Signal Generator	Agilent	N5182A	MY49060650	2020/10/12	2021/10/11
Signal Generator	Agilent	E8257D	MY44320250	2020/10/12	2021/10/11

Test Equipment Of Conducted Peak Output Power

Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due
Spectrum	R&S	FSP40	100817	2020/10/12	2021/10/11
Spectrum	Agilent	N9020A	MY49100060	2020/10/12	2021/10/11
Signal Generator	Agilent	N5182A	MY49060650	2020/10/12	2021/10/11
Signal Generator	Agilent	E8257D	MY44320250	2020/10/12	2021/10/11

Test Equipment Of Conducted Emissions at AC Power Line (150kHz-30MHz)

Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due
Shield room	SKET	833	N/A	2020/11/25	2023/11/24
Receiver	R&S	ESPI3	101082	2020/10/12	2021/10/11
LISN	R&S	ENV216	3560.6550.15	2020/10/12	2021/10/11
LISN	AT	AT166-2	AKK1806000003	2020/10/12	2021/10/11
EMI software	EZ	EZ-EMC	EEMC-3A1	N/A	N/A

Test Equipment Of Power Spectrum Density

Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due
Spectrum	R&S	FSP40	100817	2020/10/12	2021/10/11
Spectrum	Agilent	N9020A	MY49100060	2020/10/12	2021/10/11
Signal Generator	Agilent	N5182A	MY49060650	2020/10/12	2021/10/11
Signal Generator	Agilent	E8257D	MY44320250	2020/10/12	2021/10/11

10 ANTENNA REQUIREMENT

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	N/A

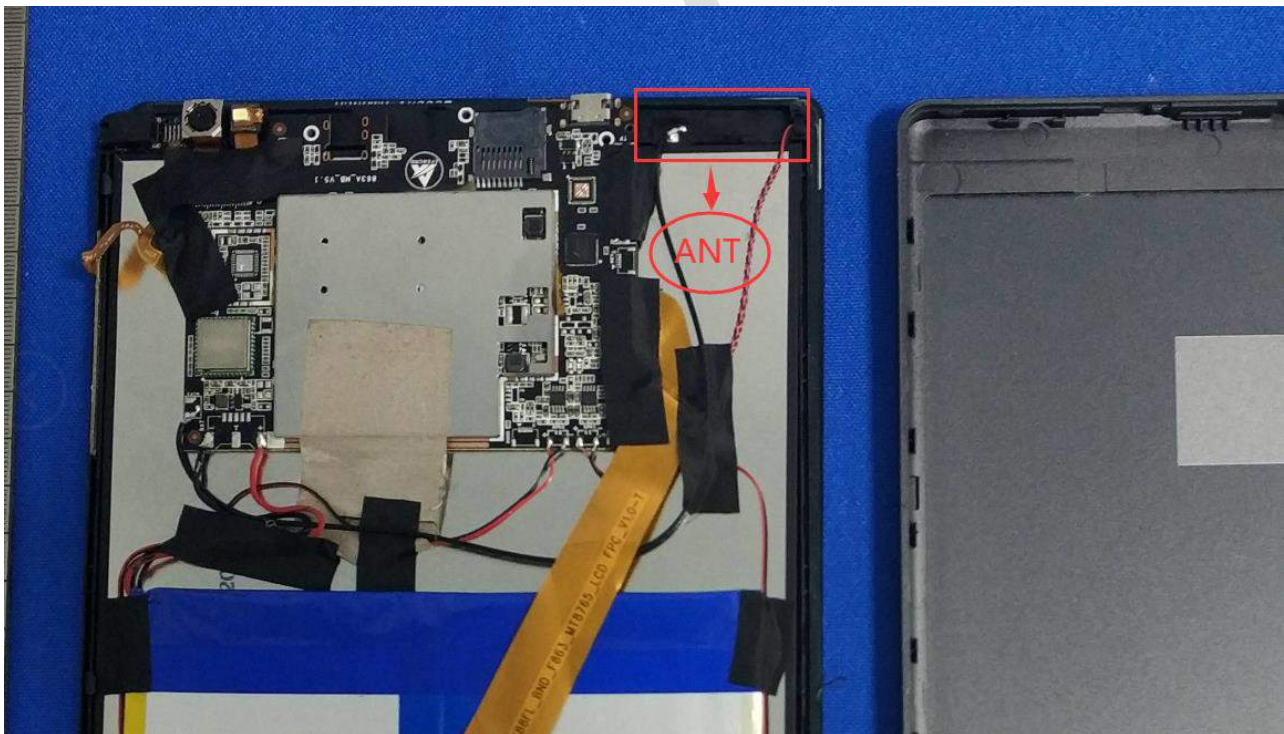
10.1 CONCLUSION

Standard Requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of an so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 1.52dBi.



11 RADIATED SPURIOUS EMISSIONS

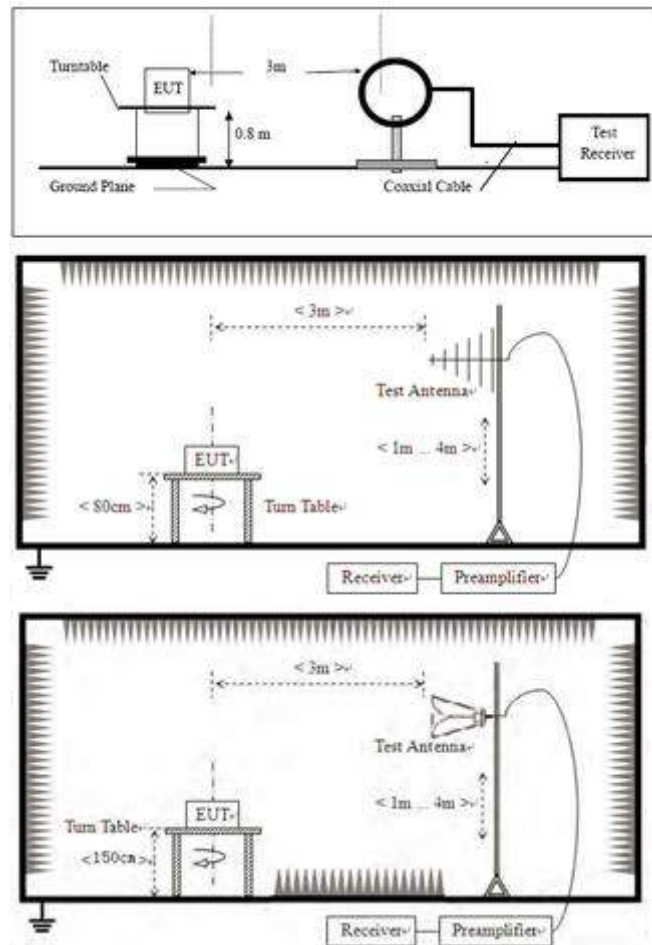
Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 6.4,6.5,6.6
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Jozu
Temperature	25℃
Humidity	60%

11.1 LIMITS

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

11.2 BLOCK DIAGRAM OF TEST SETUP



11.3 PROCEDURE

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

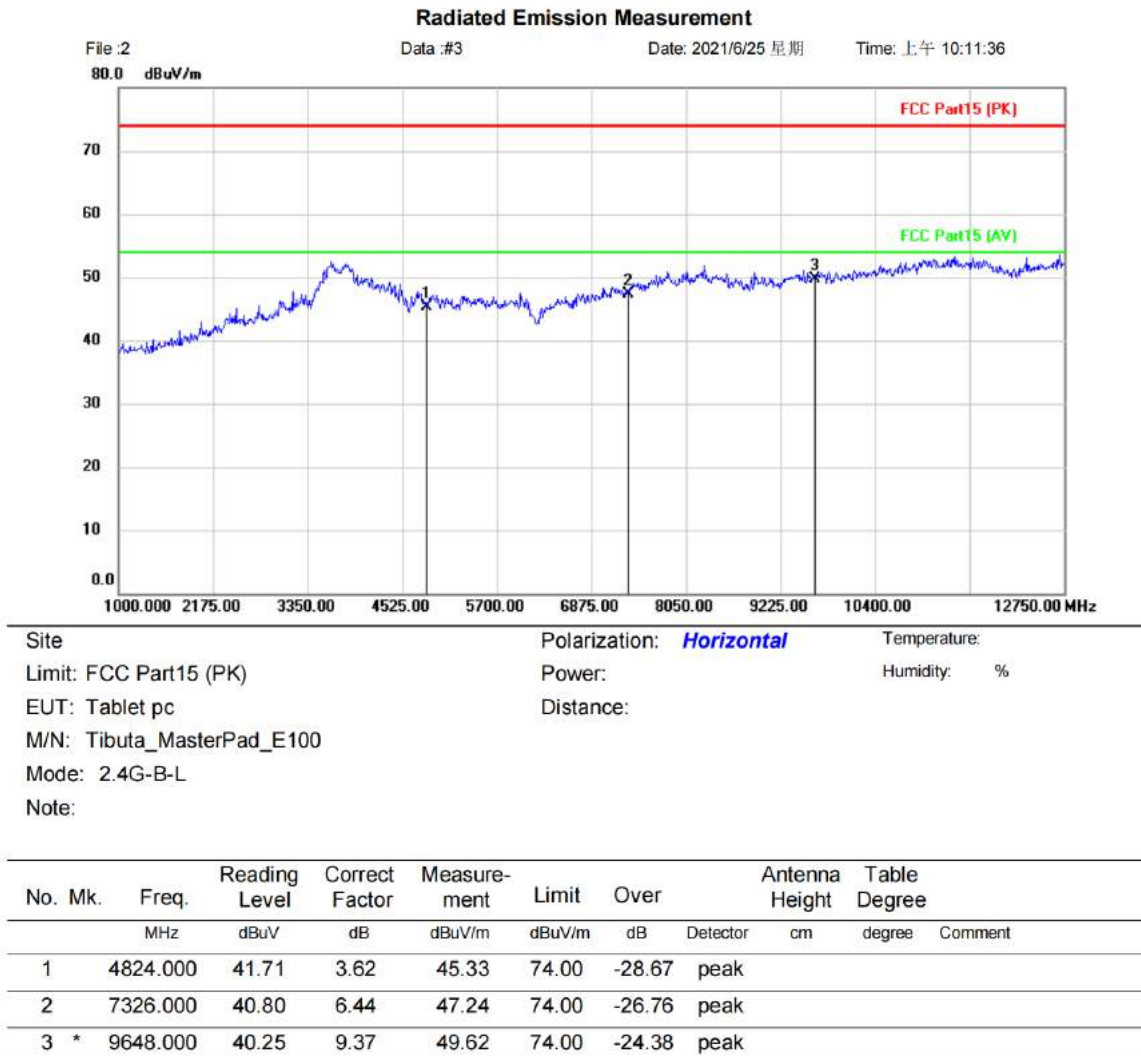
Remark:

- 1) For emission below 1GHz, through pre-scan found the worst case is the lowest channel. Only the worst case is recorded in the report.
- 2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor
- 3) Scan from 9kHz to 25GHz, the disturbance above 12.75GHz and below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported. fundamental frequency is blocked by filter, and only spurious emission is shown.
- 4) For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

11.4 TEST DATA

802.11b:

[TestMode: TX 11B low channel]; [Polarity: Horizontal]



*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX 11B low channel]; [Polarity: Vertical]



*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX 11B mid channel]; [Polarity: Vertical]



*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX 11B mid channel]; [Polarity: Horizontal]

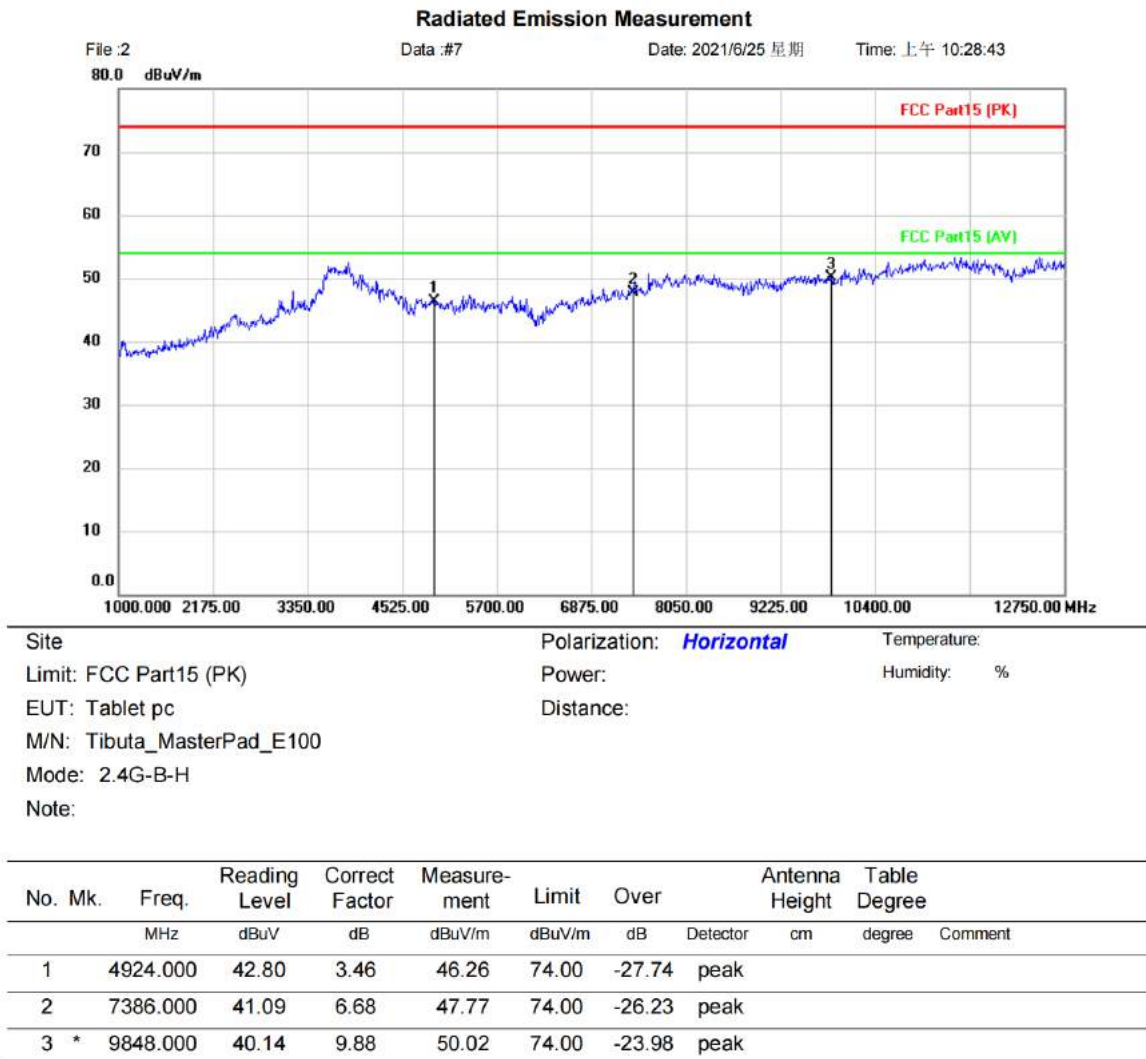


*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX 11B high channel]; [Polarity: Horizontal]

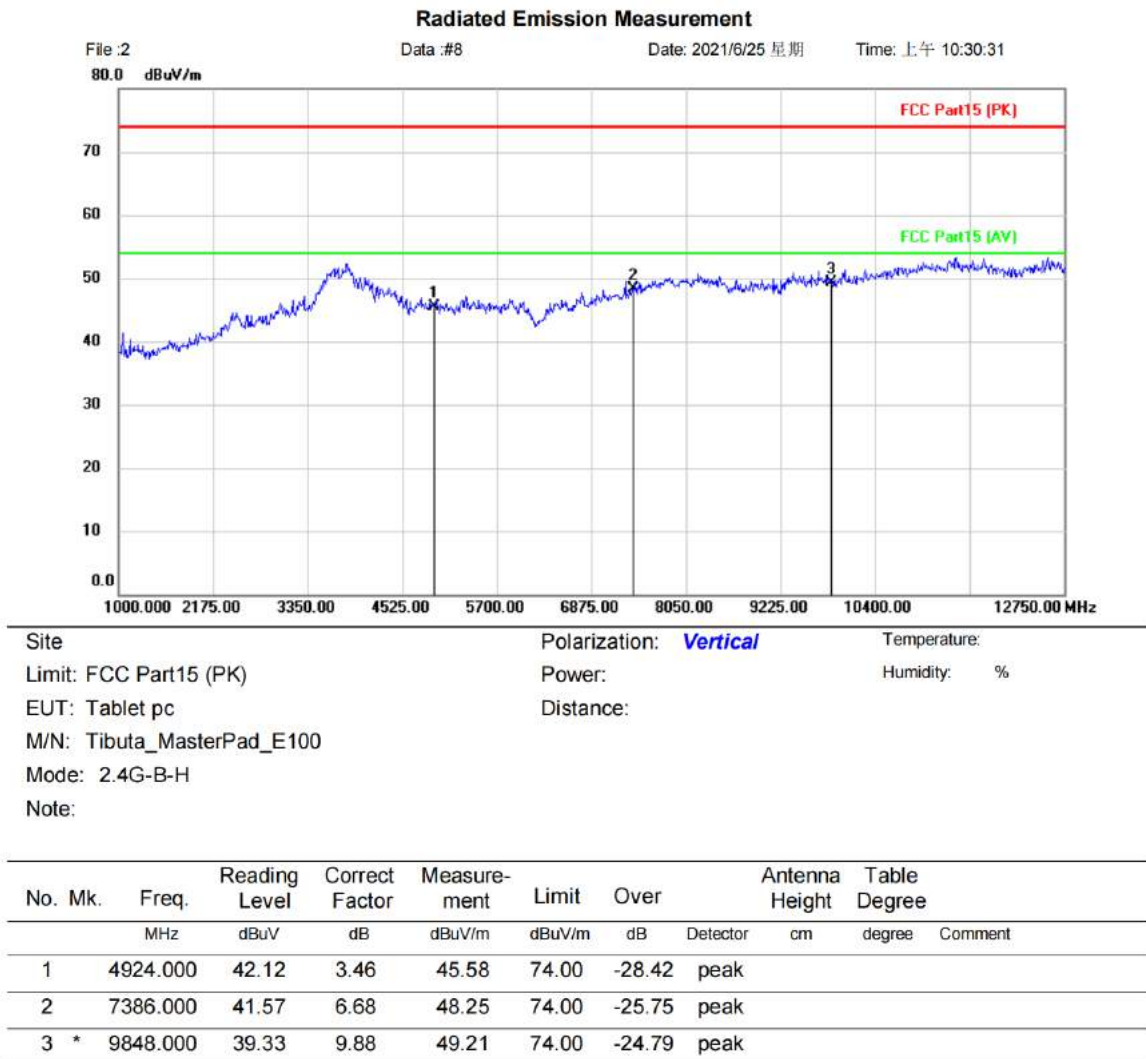


*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX 11B high channel]; [Polarity: Vertical]



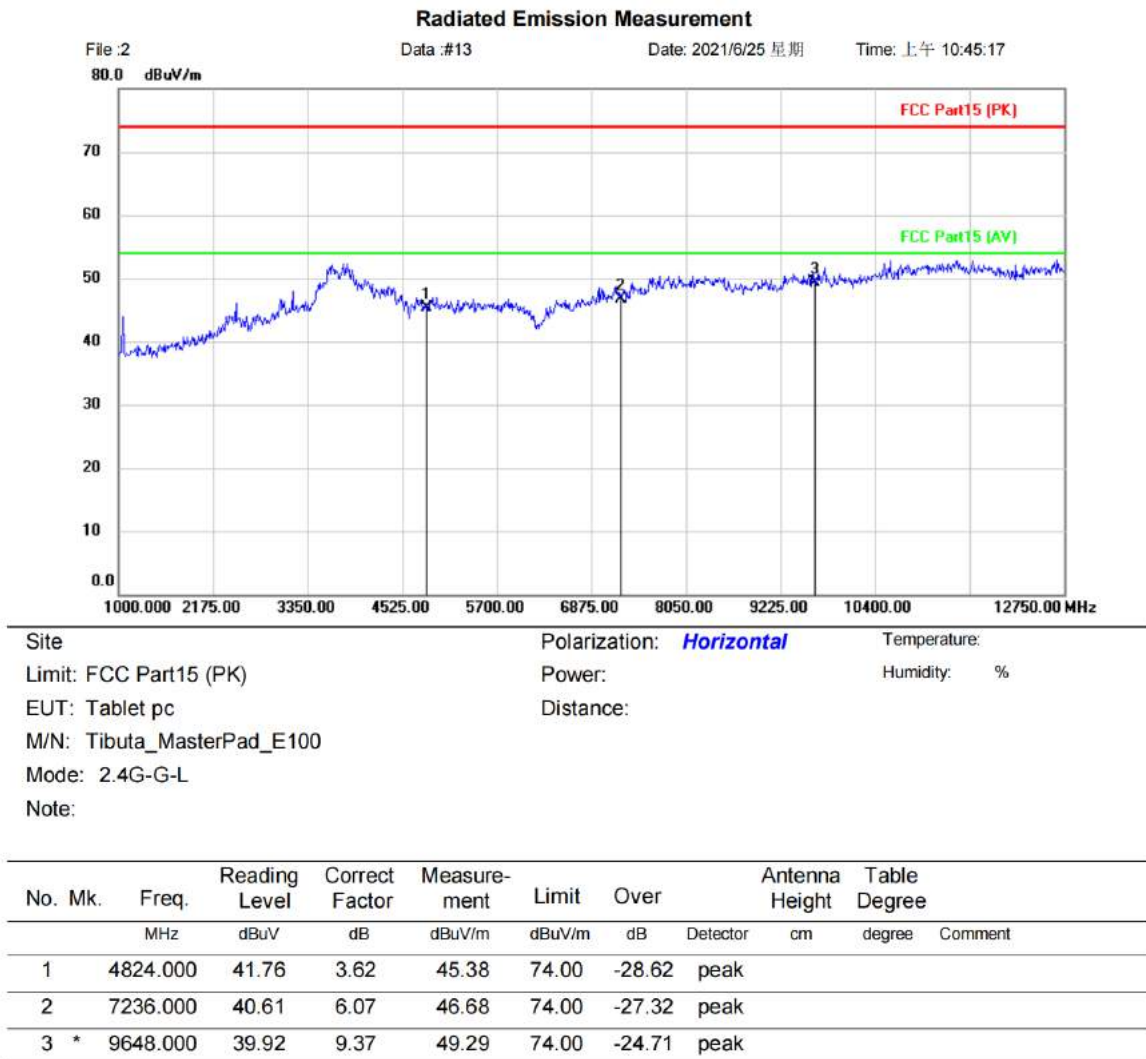
*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

802.11g:

[TestMode: TX 11G low channel]; [Polarity: Horizontal]

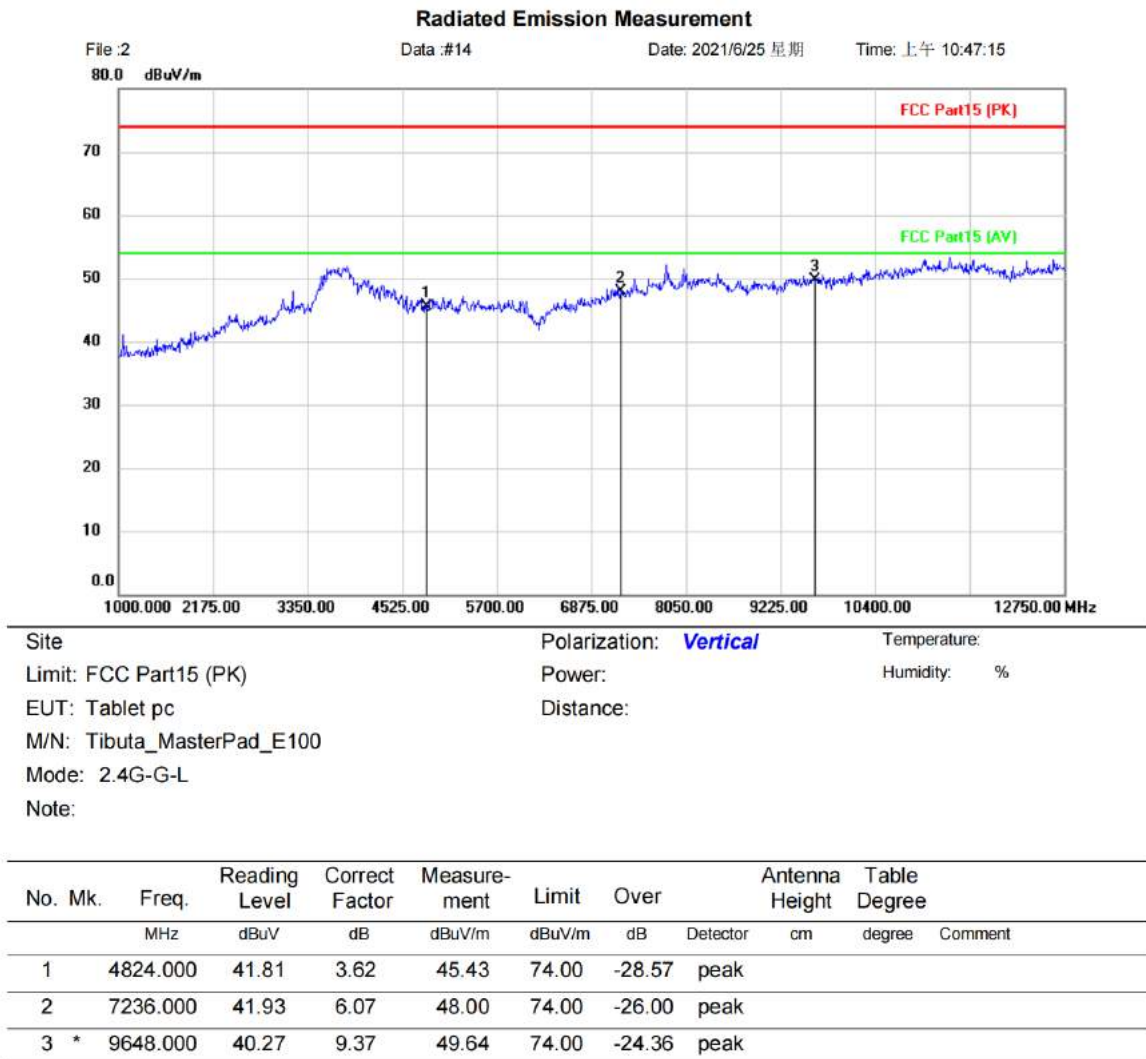


*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX 11G low channel]; [Polarity: Vertical]



*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX 11G mid channel]; [Polarity: Vertical]

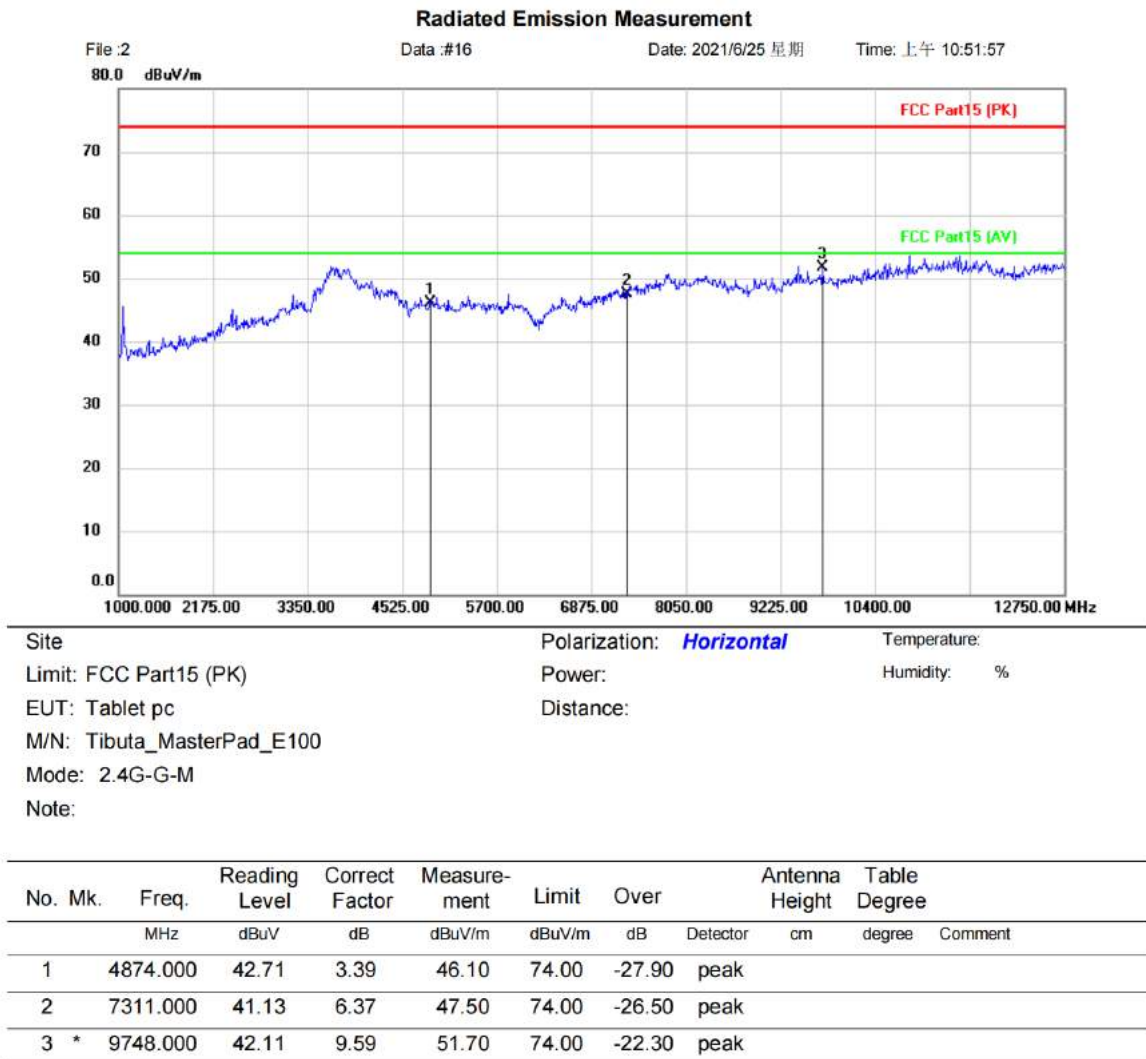


*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX 11G mid channel]; [Polarity: Horizontal]



*:Maximum data x:Over limit !:over margin

◁Reference Only

Test Result: Pass

[TestMode: TX 11G high channel]; [Polarity: Horizontal]



*:Maximum data x:Over limit !:over margin

◁Reference Only

Test Result: Pass

[TestMode: TX 11G high channel]; [Polarity: Vertical]



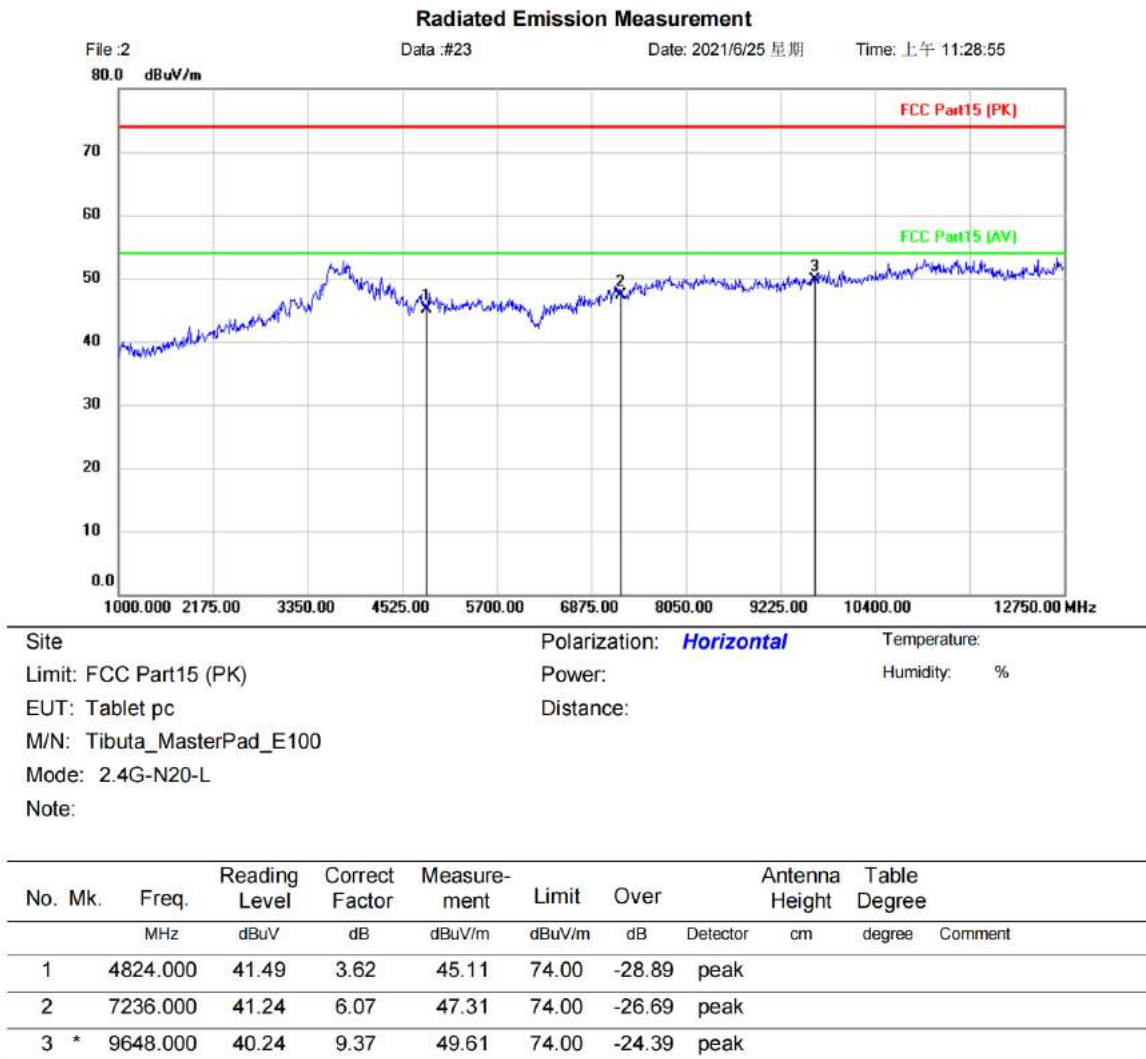
*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

802.11n20:

[TestMode: TX N20 low channel]; [Polarity: Horizontal]



*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX N20 low channel]; [Polarity: Vertical]



*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX N20 mid channel]; [Polarity: Horizontal]



*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX N20 mid channel]; [Polarity: Vertical]



*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX N20 high channel]; [Polarity: Vertical]



*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX N20 high channel]; [Polarity: Horizontal]



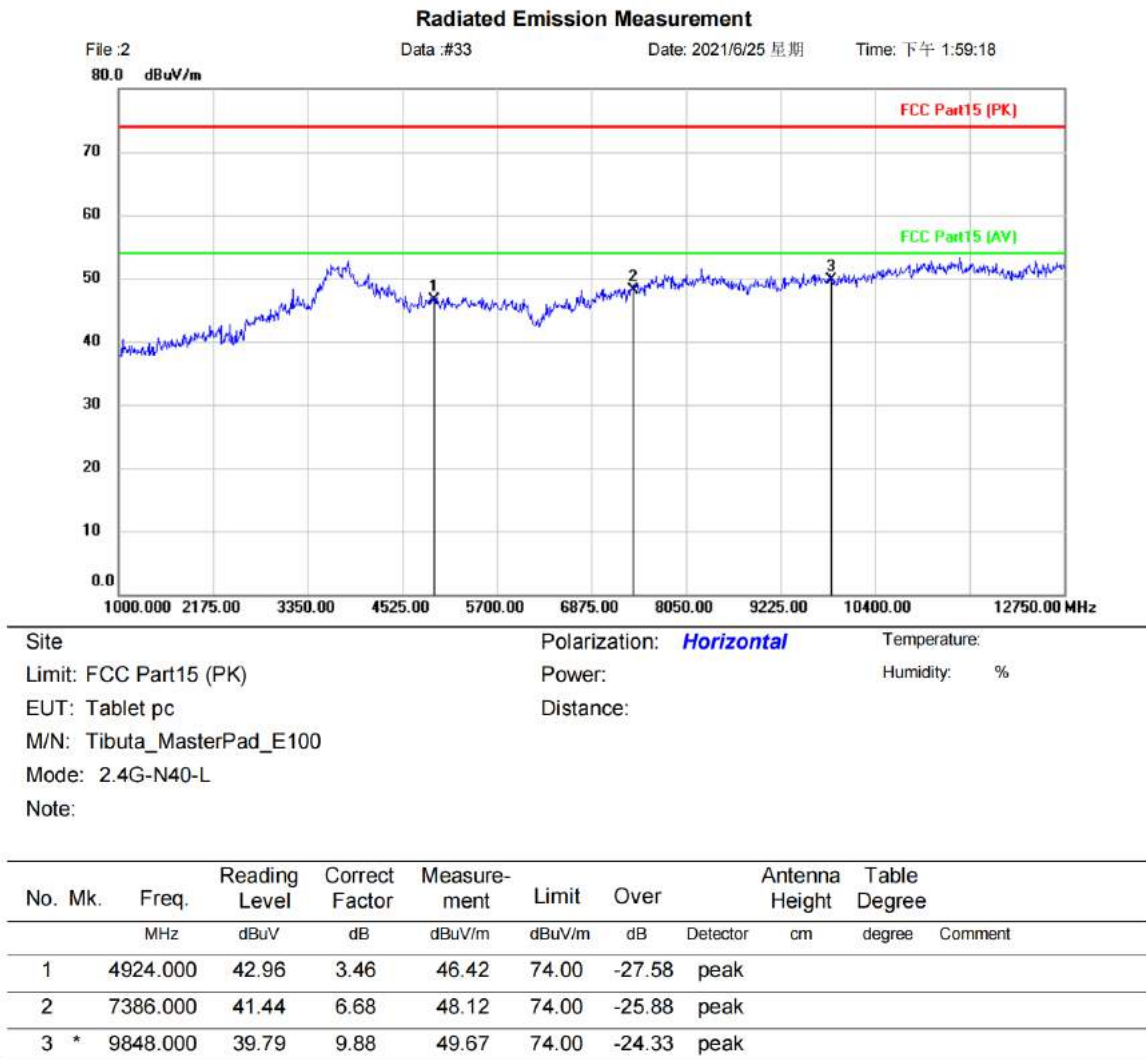
*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

802.11n40:

[TestMode: TX N40 low channel]; [Polarity: Horizontal]



*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX N40 low channel]; [Polarity: Vertical]



*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX N40 mid channel]; [Polarity: Vertical]

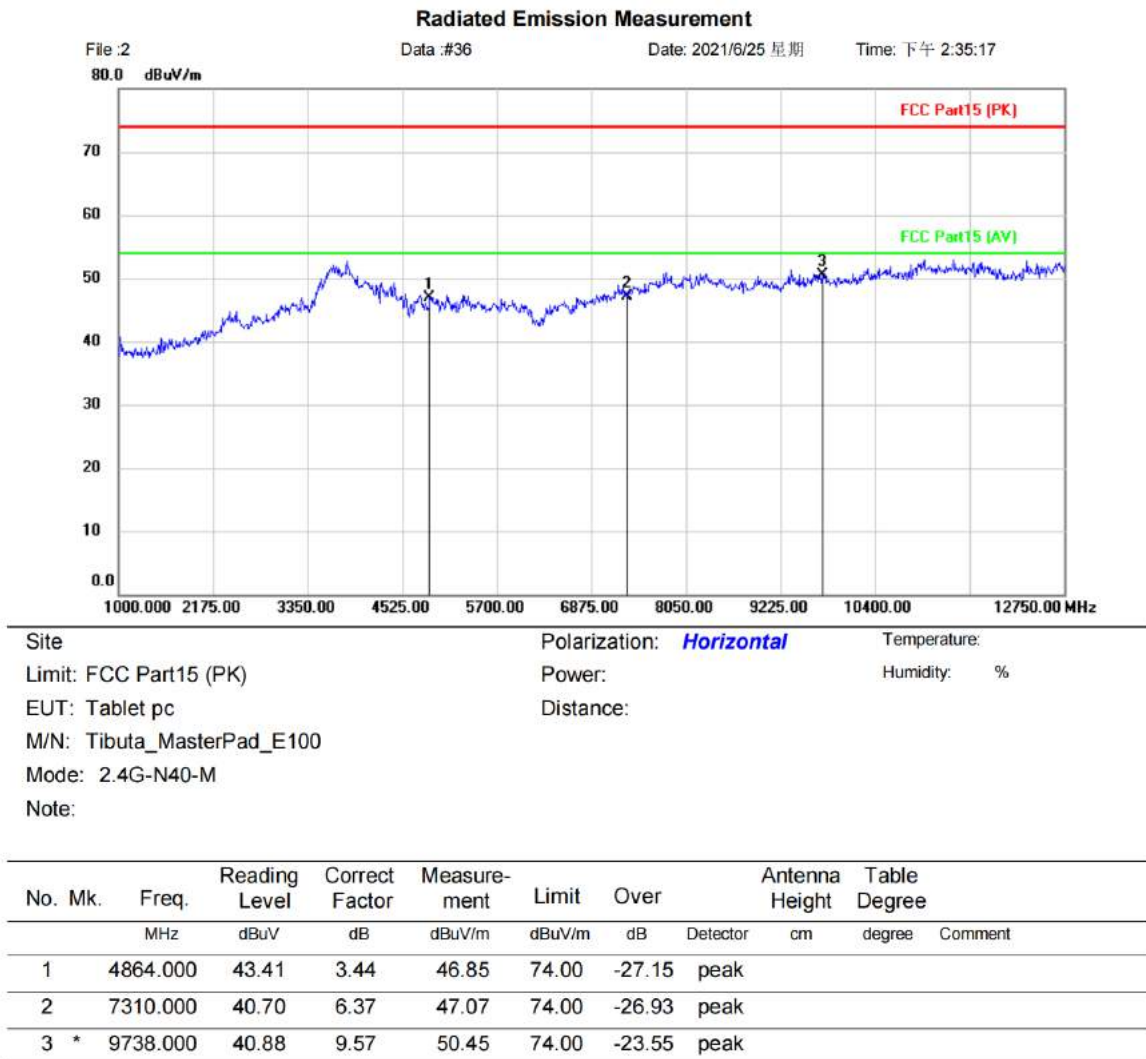


*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX N40 mid channel]; [Polarity: Horizontal]



*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX N40 high channel]; [Polarity: Vertical]



*:Maximum data x:Over limit !:over margin

◁Reference Only

Test Result: Pass

[TestMode: TX N40 high channel]; [Polarity: Horizontal]



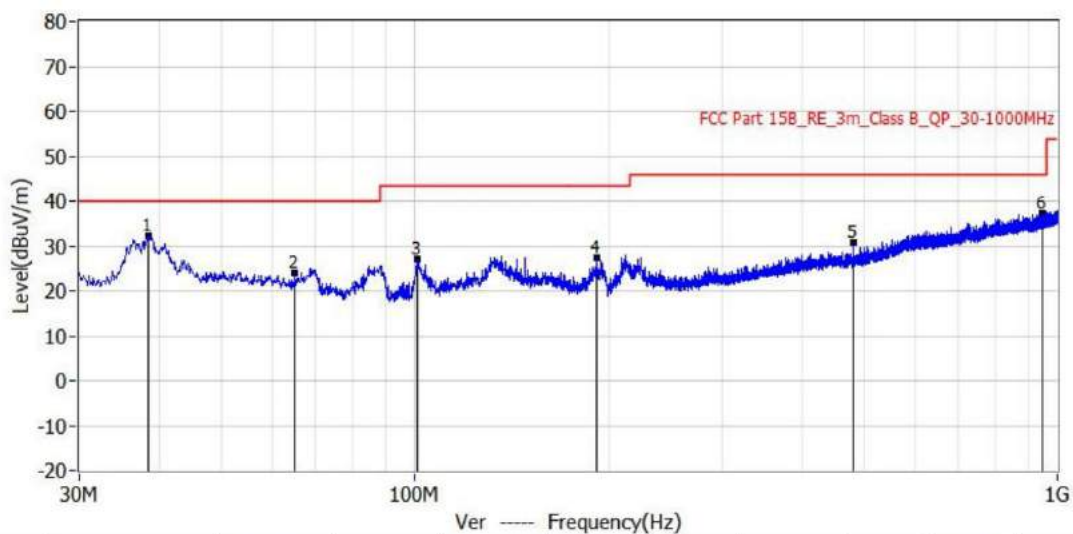
*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX below 1G]; [Polarity: Vertical]

Test Lab: BlueAsia EMC Lab (RE #1)	Project: BLA-EMC 202106-A26
EUT: Tablet pc	Test Engineer: Charlie
M/N: Tibuta_MastrePad_E100	Temperature: 25°C
S/N:	Humidity: 53%RH
Test Mode: 2.4 G WIFI	Test Voltage:
Note:	Test Data: 2021-07-02 11:27:37

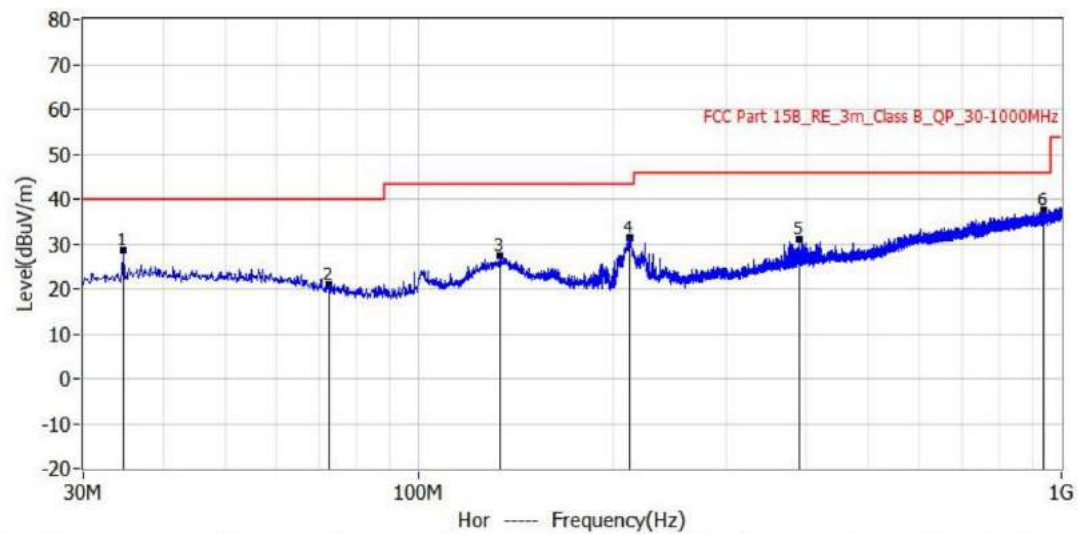


No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar	Height cm	Angle deg
1*	38.366MHz	40.0	32.3	-7.7	8.4	23.9	QP	Ver	100.0	0.0
2*	65.041MHz	40.0	24.0	-16.0	1.6	22.4	QP	Ver	100.0	299.0
3*	100.568MHz	43.5	27.2	-16.3	6.5	20.7	QP	Ver	100.0	0.0
4*	191.626MHz	43.5	27.4	-16.1	6.4	21.0	QP	Ver	100.0	170.0
5*	479.959MHz	46.0	30.8	-15.2	2.6	28.2	QP	Ver	100.0	324.0
6*	945.559MHz	46.0	37.3	-8.7	1.8	35.5	QP	Ver	100.0	302.0

Test Result: Pass

[TestMode: TX below 1G]; [Polarity: Horizontal]

Test Lab: BlueAsia EMC Lab (RE #1)	Project: BLA-EMC 202106-A26
EUT: Tablet pc	Test Engineer: Charlie
M/N: Tibuta_MastrePad_E100	Temperature: 25°C
S/N:	Humidity: 53%RH
Test Mode: 2.4 G WIFI	Test Voltage:
Note:	Test Data: 2021-07-02 11:33:05



No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar	Height cm	Angle deg
1*	34.608MHz	40.0	28.6	-11.4	5.1	23.5	QP	Hor	100.0	20.0
2*	72.438MHz	40.0	21.0	-19.0	0.0	21.0	QP	Hor	100.0	0.0
3*	133.669MHz	43.5	27.3	-16.2	3.9	23.4	QP	Hor	100.0	0.0
4*	212.724MHz	43.5	31.5	-12.0	10.2	21.3	QP	Hor	100.0	288.0
5*	391.568MHz	46.0	31.0	-15.0	4.0	27.0	QP	Hor	100.0	279.0
6*	938.284MHz	46.0	37.6	-8.4	2.2	35.4	QP	Hor	100.0	0.0

Test Result: Pass

12 RADIATED EMISSIONS WHICH FALL IN THE RESTRICTED BANDS

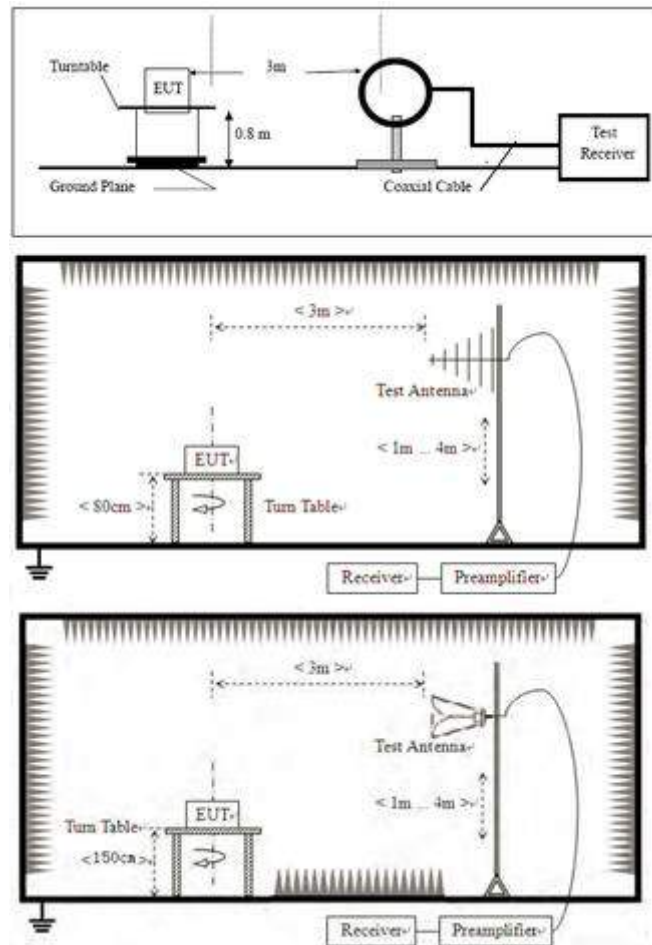
Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 6.10.5
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Jozu
Temperature	25℃
Humidity	60%

12.1 LIMITS

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

12.2 BLOCK DIAGRAM OF TEST SETUP



12.3 PROCEDURE

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

Remark 1: $\text{Level} = \text{Read Level} + \text{Cable Loss} + \text{Antenna Factor} - \text{Preamp Factor}$

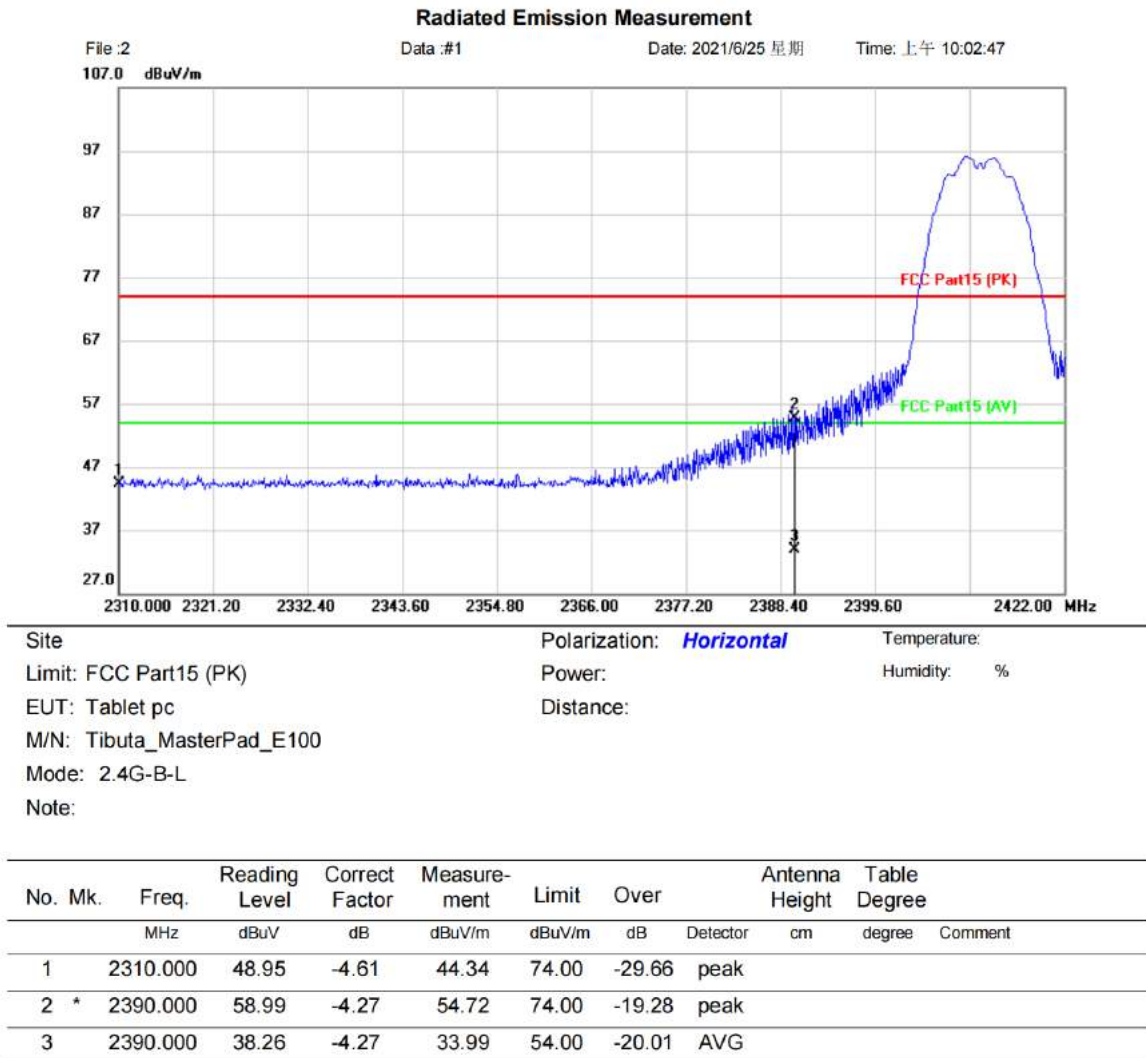
Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

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12.4 TEST DATA

802.11B:

[TestMode: TX 11B low channel]; [Polarity: Horizontal]

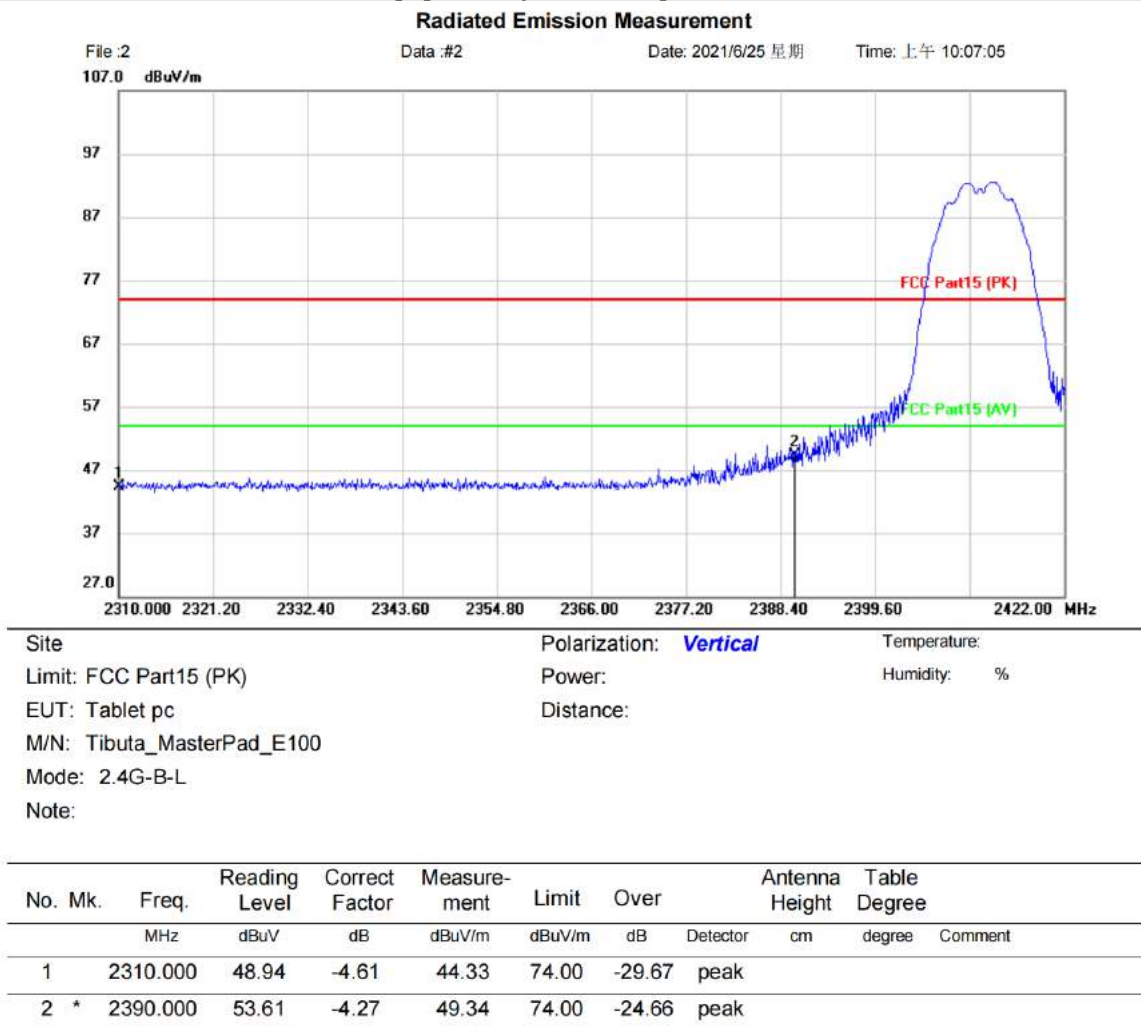


*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX 11B low channel]; [Polarity: Vertical]

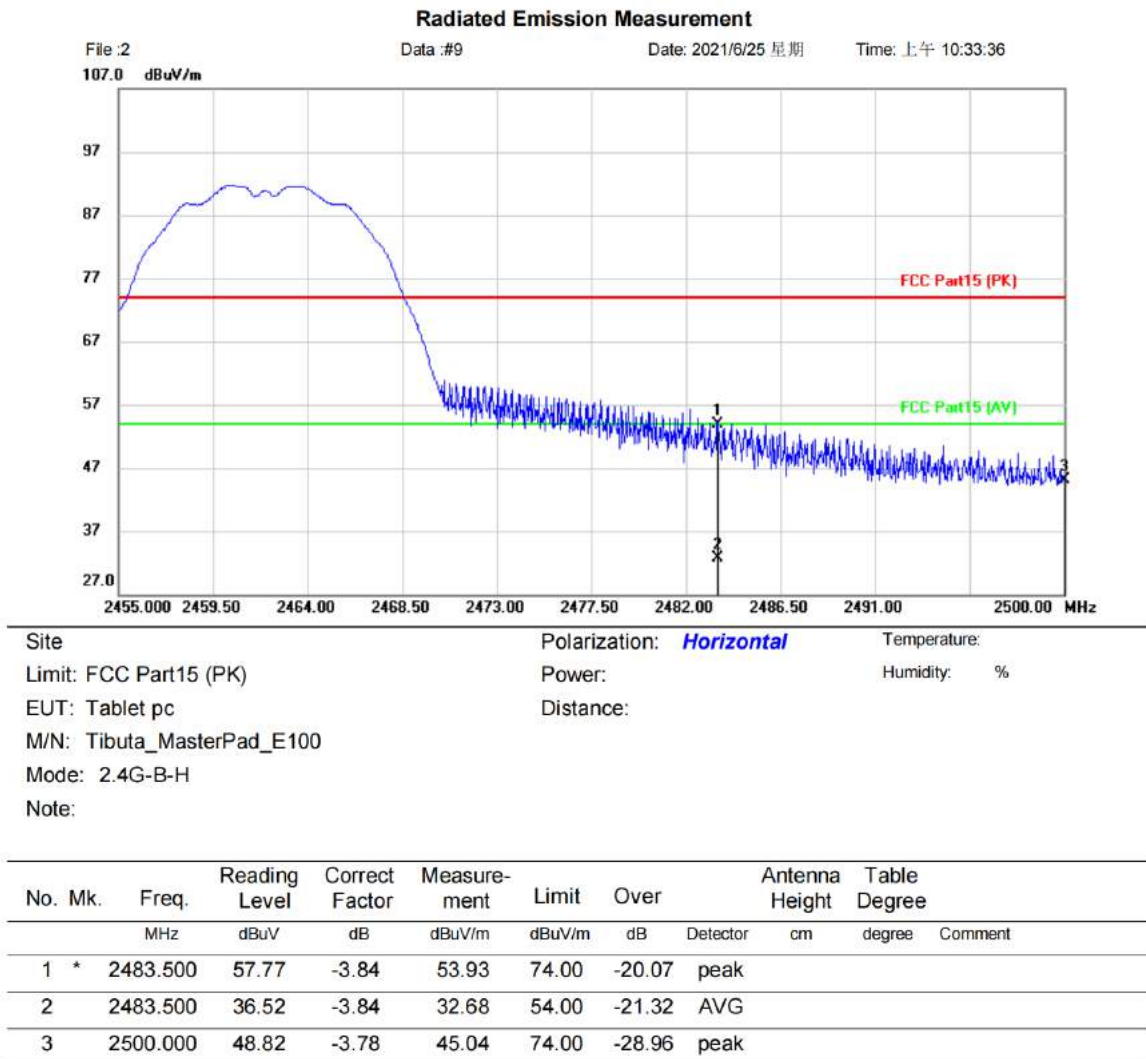


*:Maximum data x:Over limit !:over margin

◁Reference Only

Test Result: Pass

[TestMode: TX 11B high channel]; [Polarity: Horizontal]

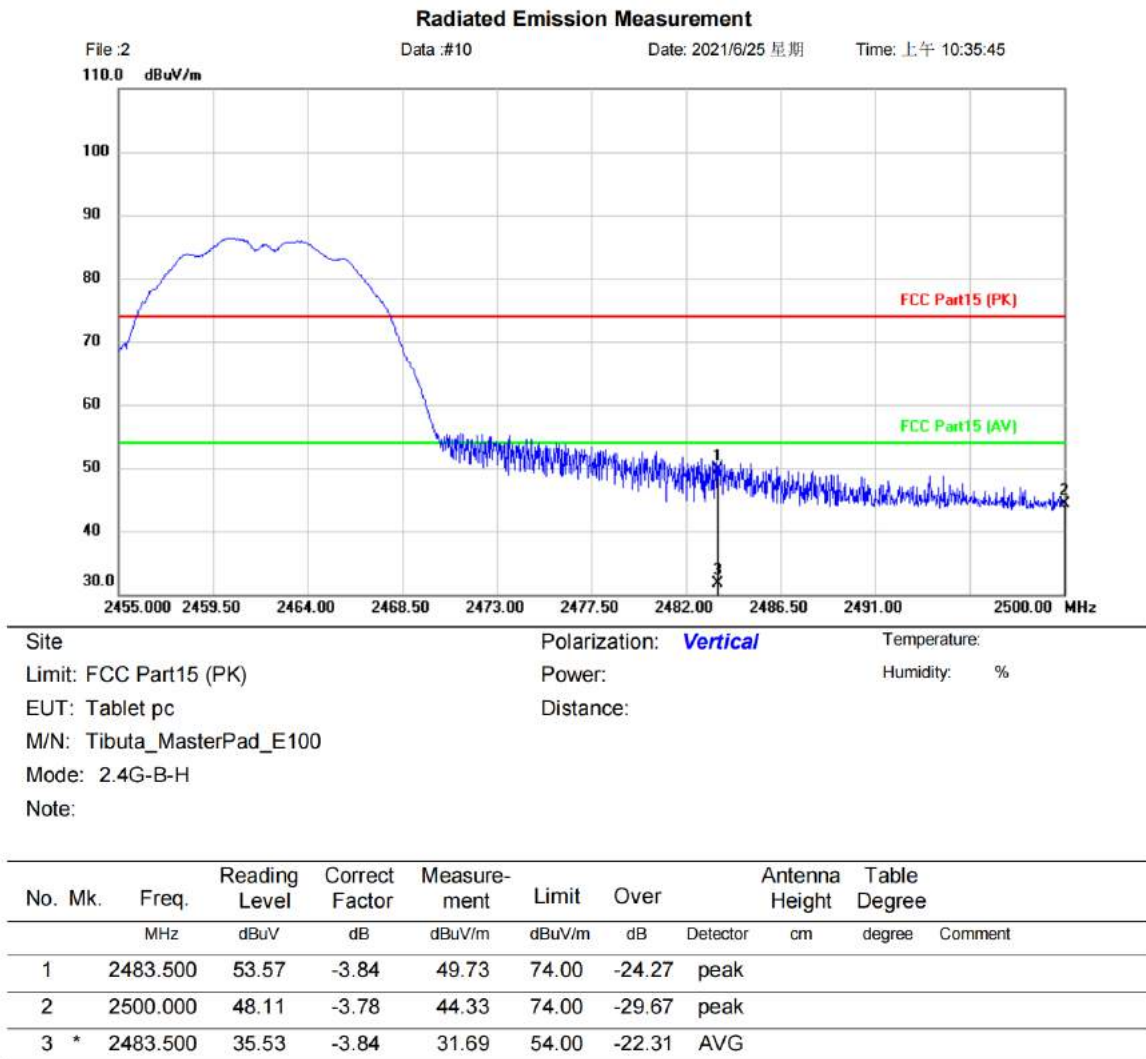


*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX 11B high channel]; [Polarity: Vertical]



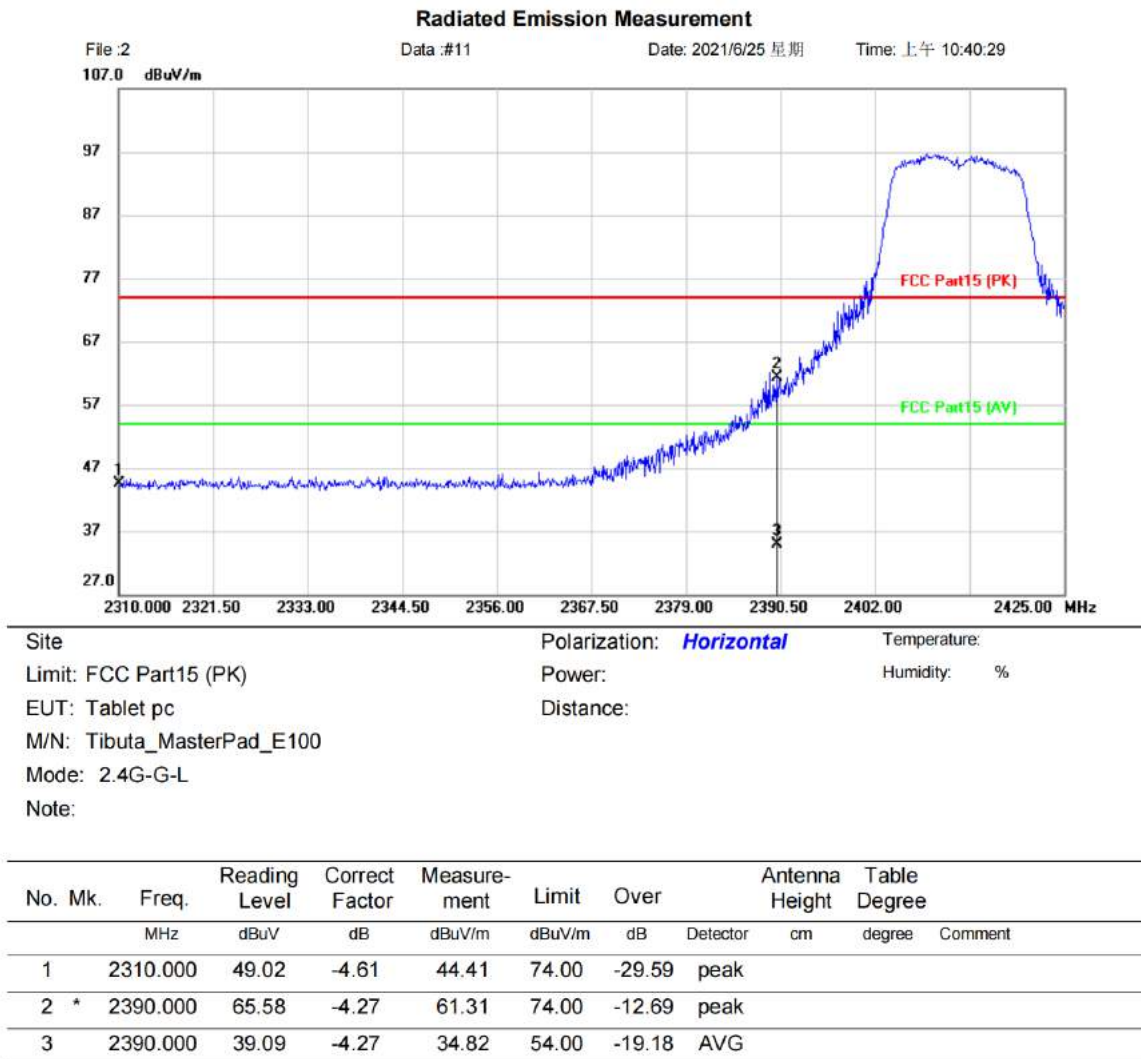
*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

802.11G:

[TestMode: TX 11G low channel]; [Polarity: Horizontal]

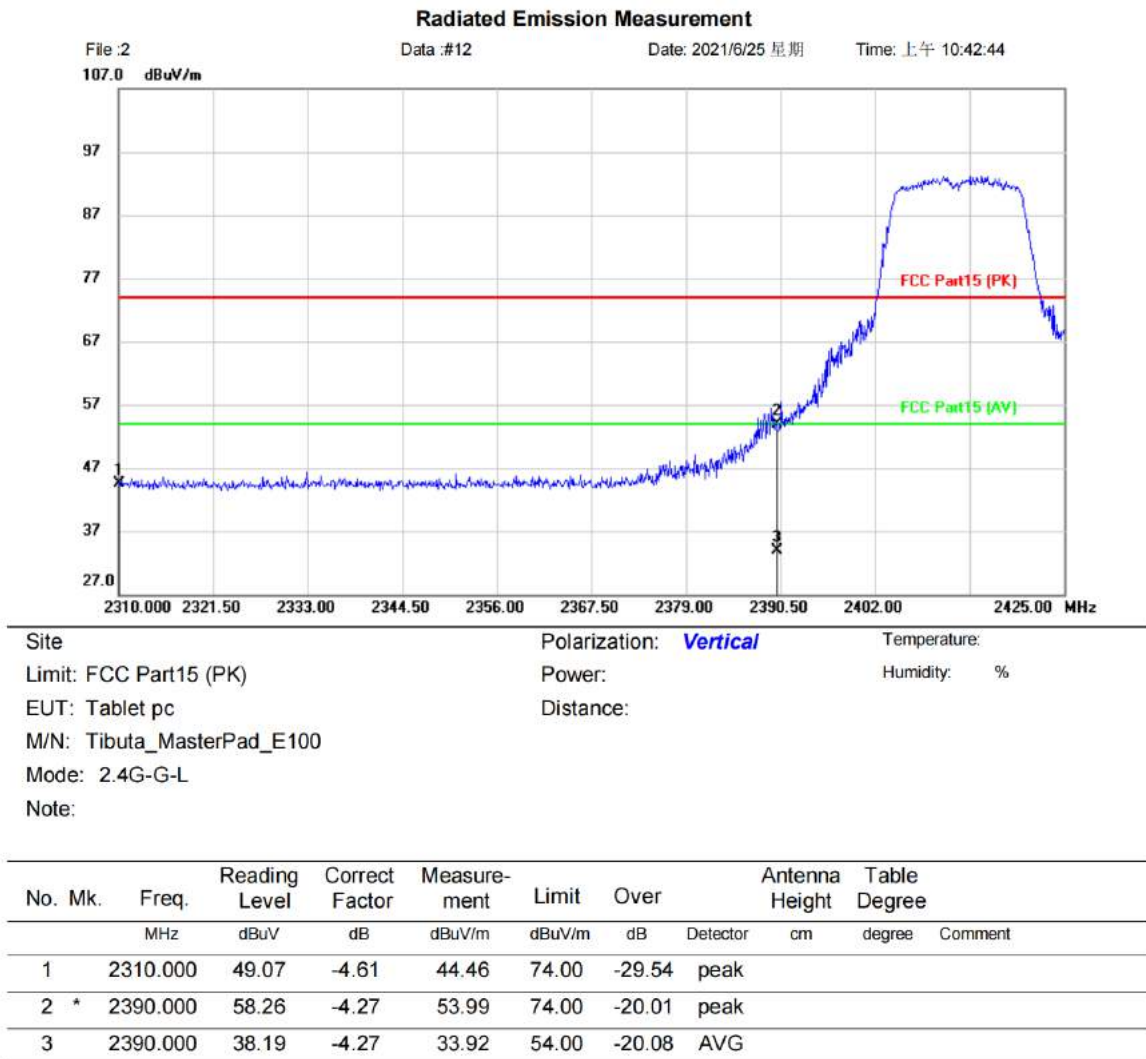


*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX 11G low channel]; [Polarity: Vertical]

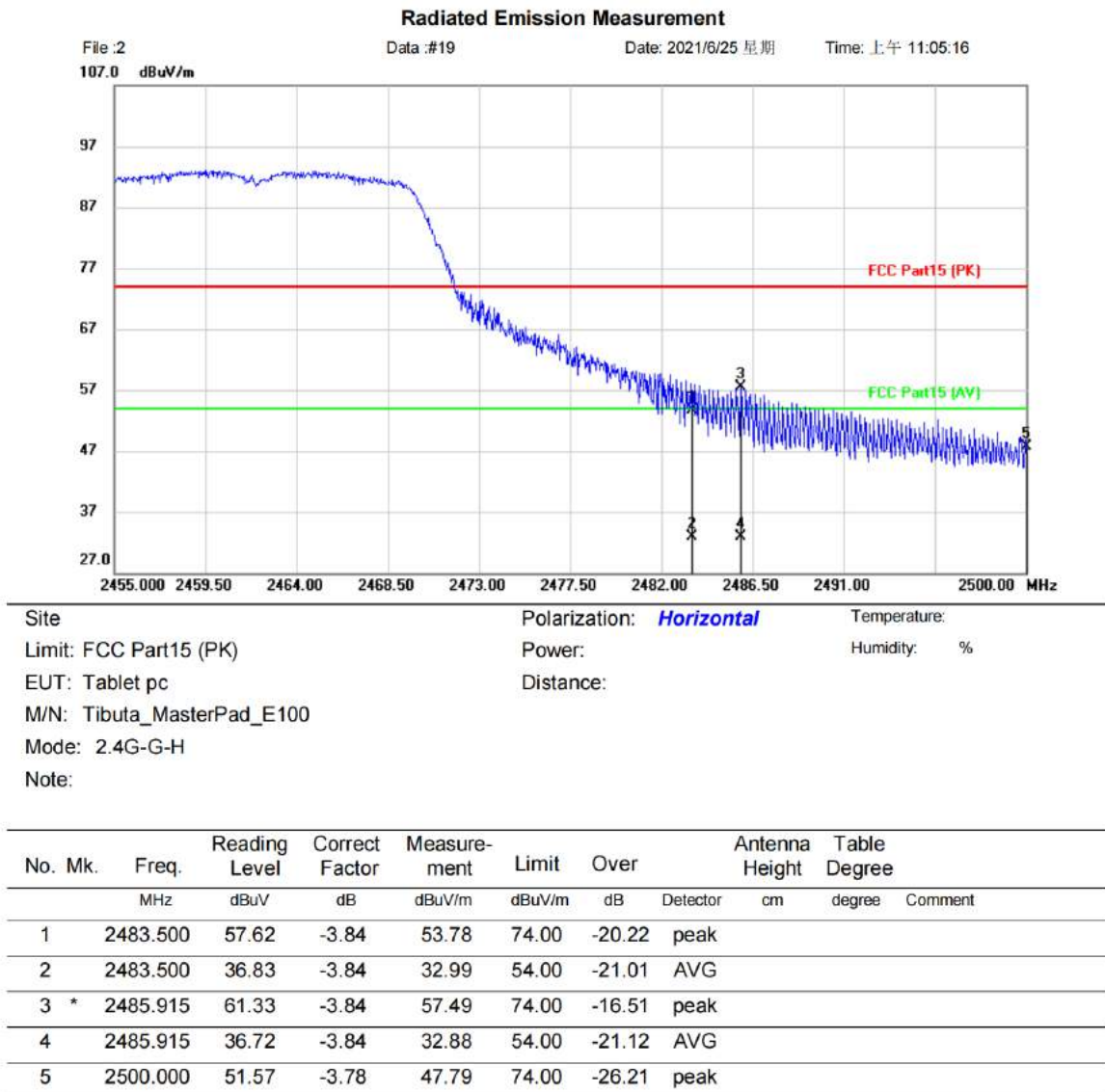


*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX 11G high channel]; [Polarity: Horizontal]

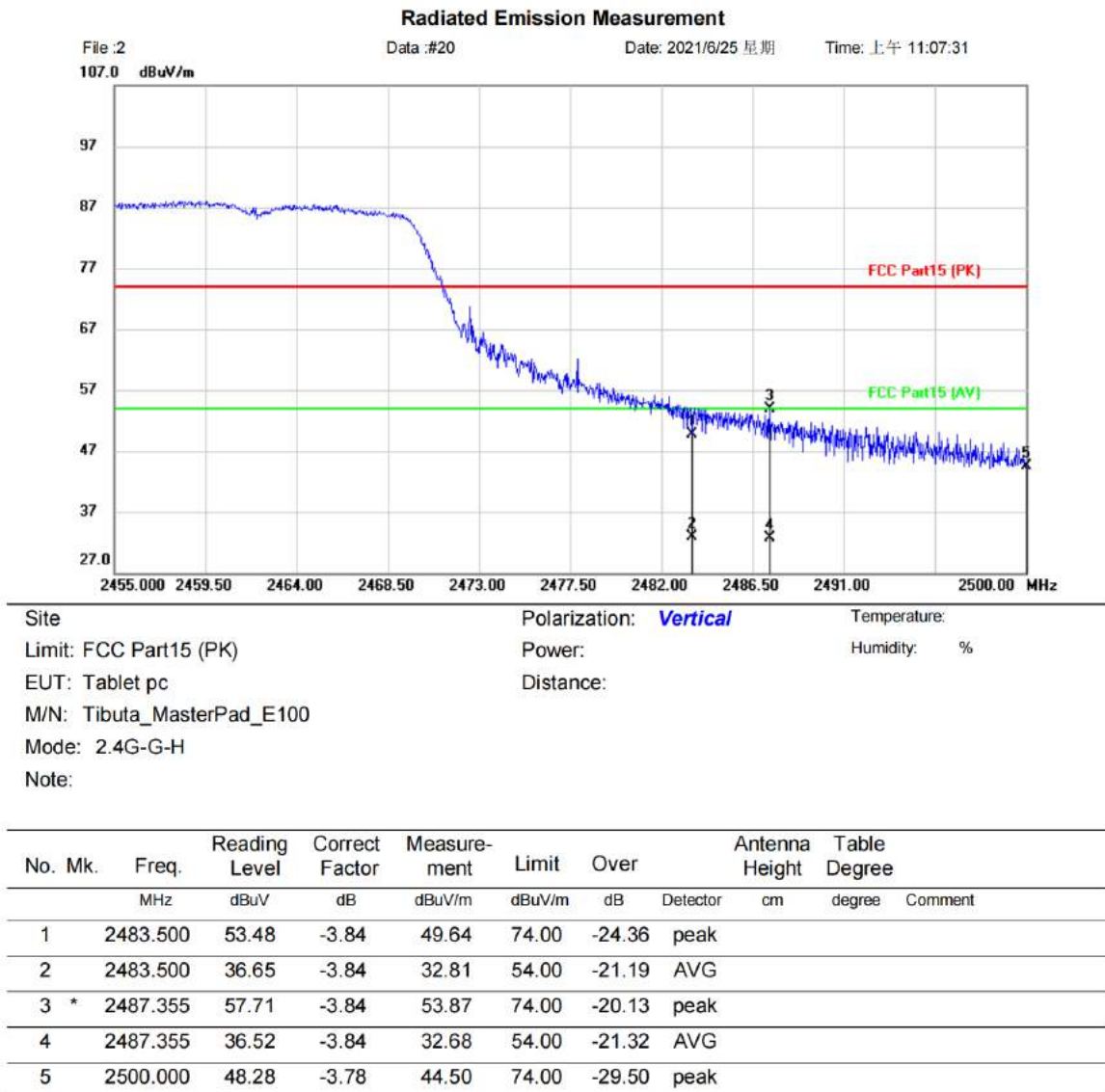


*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX 11G high channel]; [Polarity: Vertical]



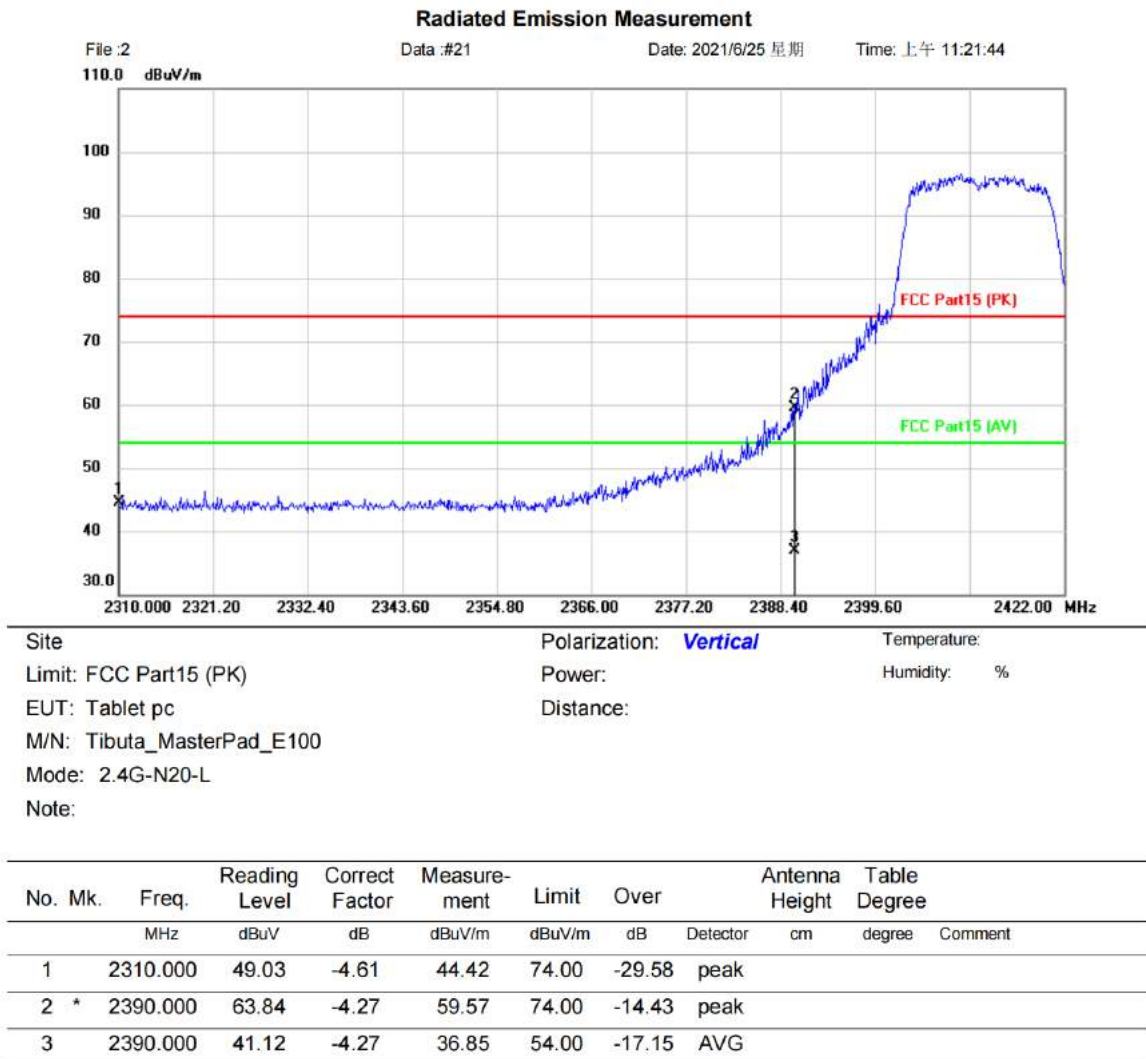
*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

802.11N20:

[TestMode: TX N20 low channel]; [Polarity: Vertical]

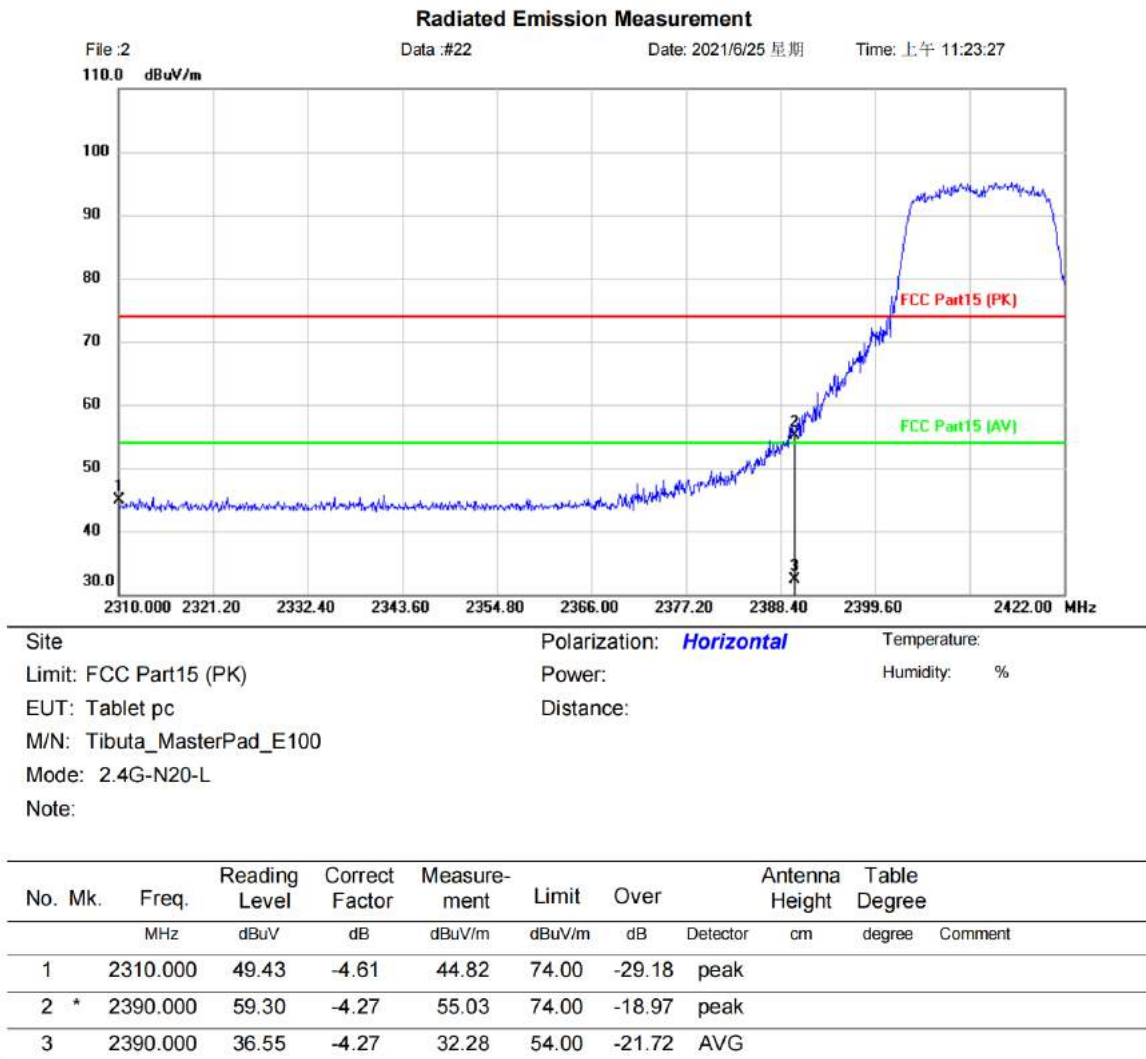


*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX N20 low channel]; [Polarity: Horizontal]

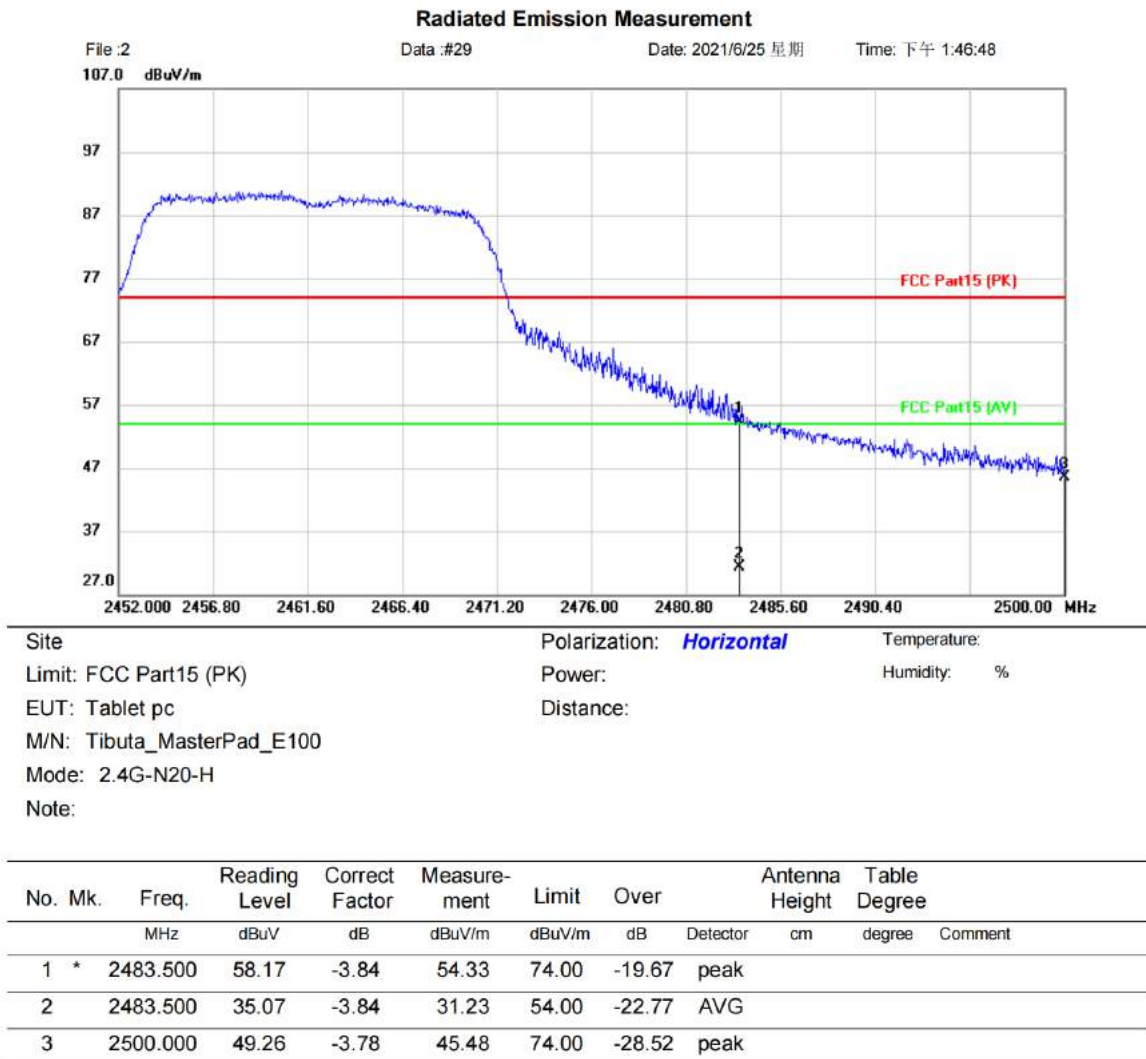


*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX N20 high channel]; [Polarity: Horizontal]

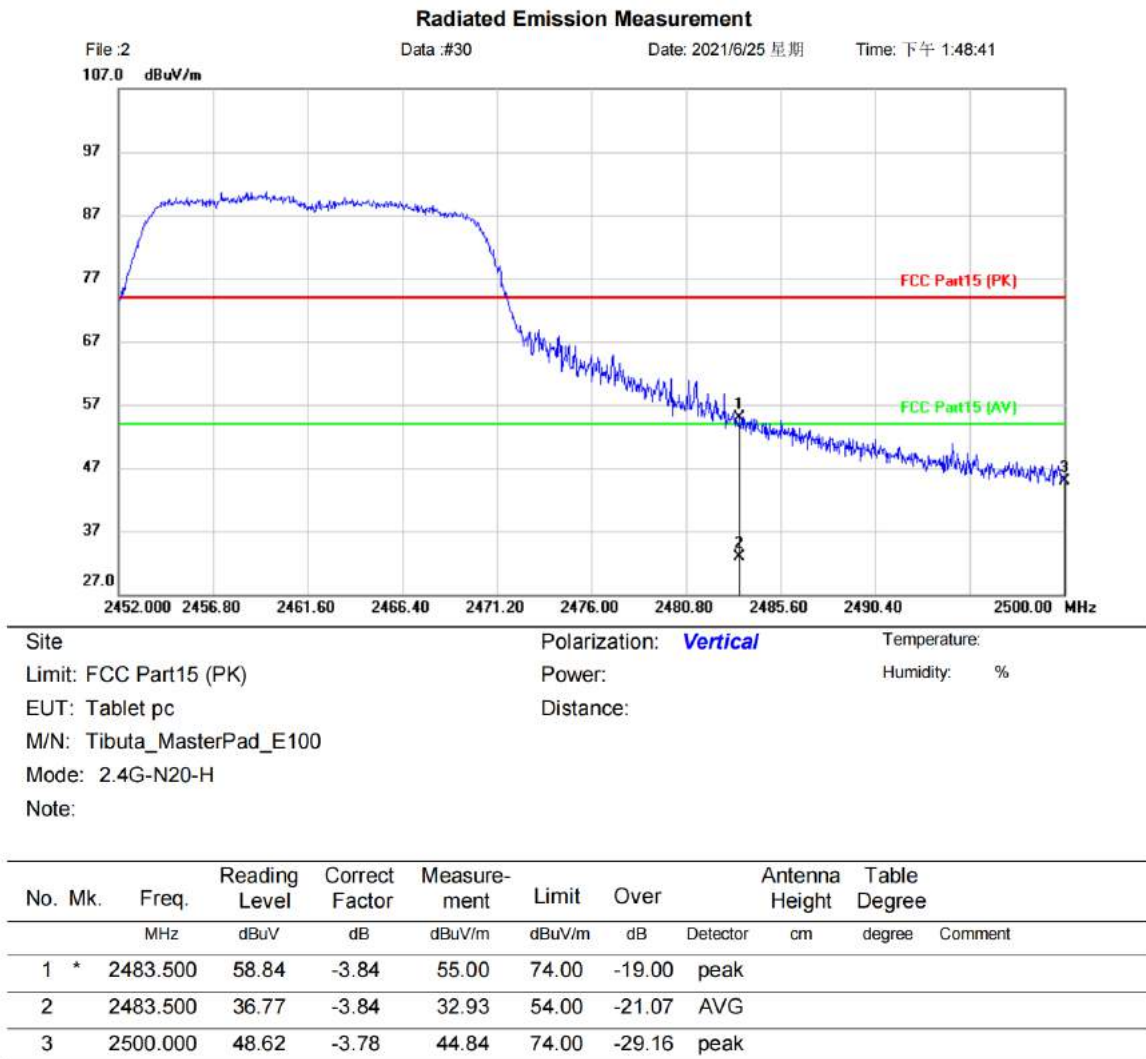


*:Maximum data x:Over limit !:over margin

◁Reference Only

Test Result: Pass

[TestMode: TX N20 high channel]; [Polarity: Vertical]



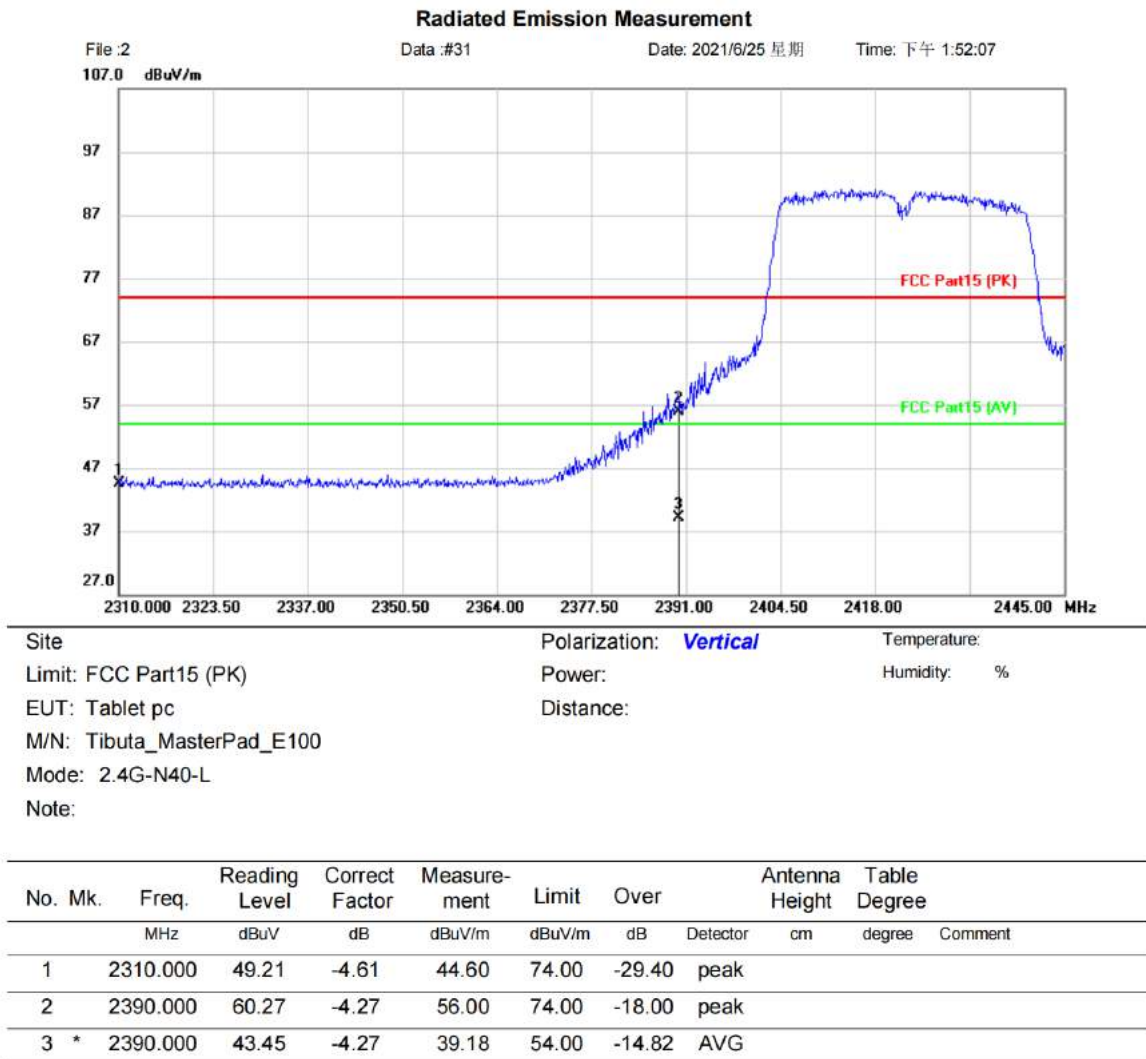
*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

802.11N40:

[TestMode: TX N40 low channel]; [Polarity: Vertical]

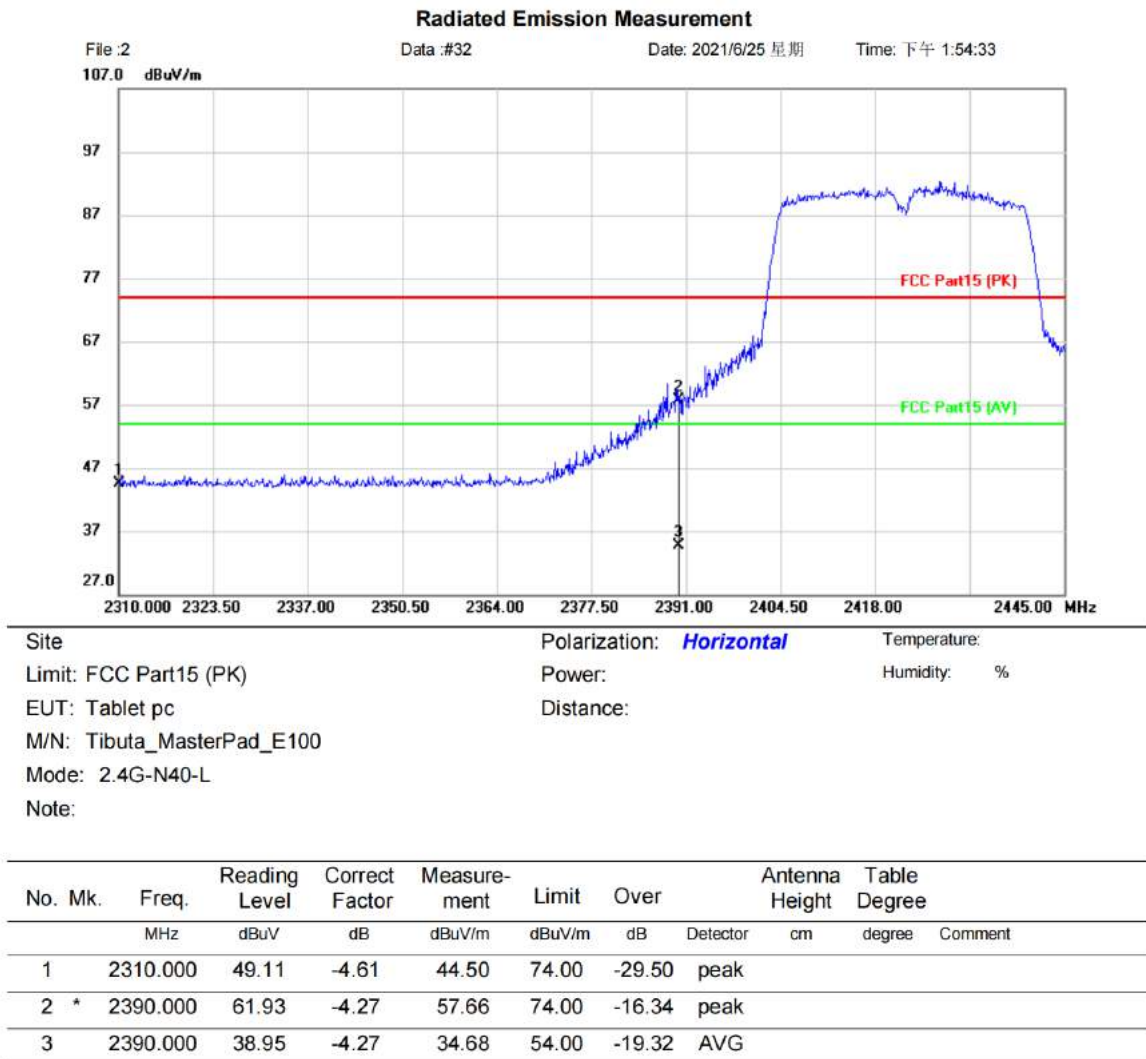


*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX N40 low channel]; [Polarity: Horizontal]

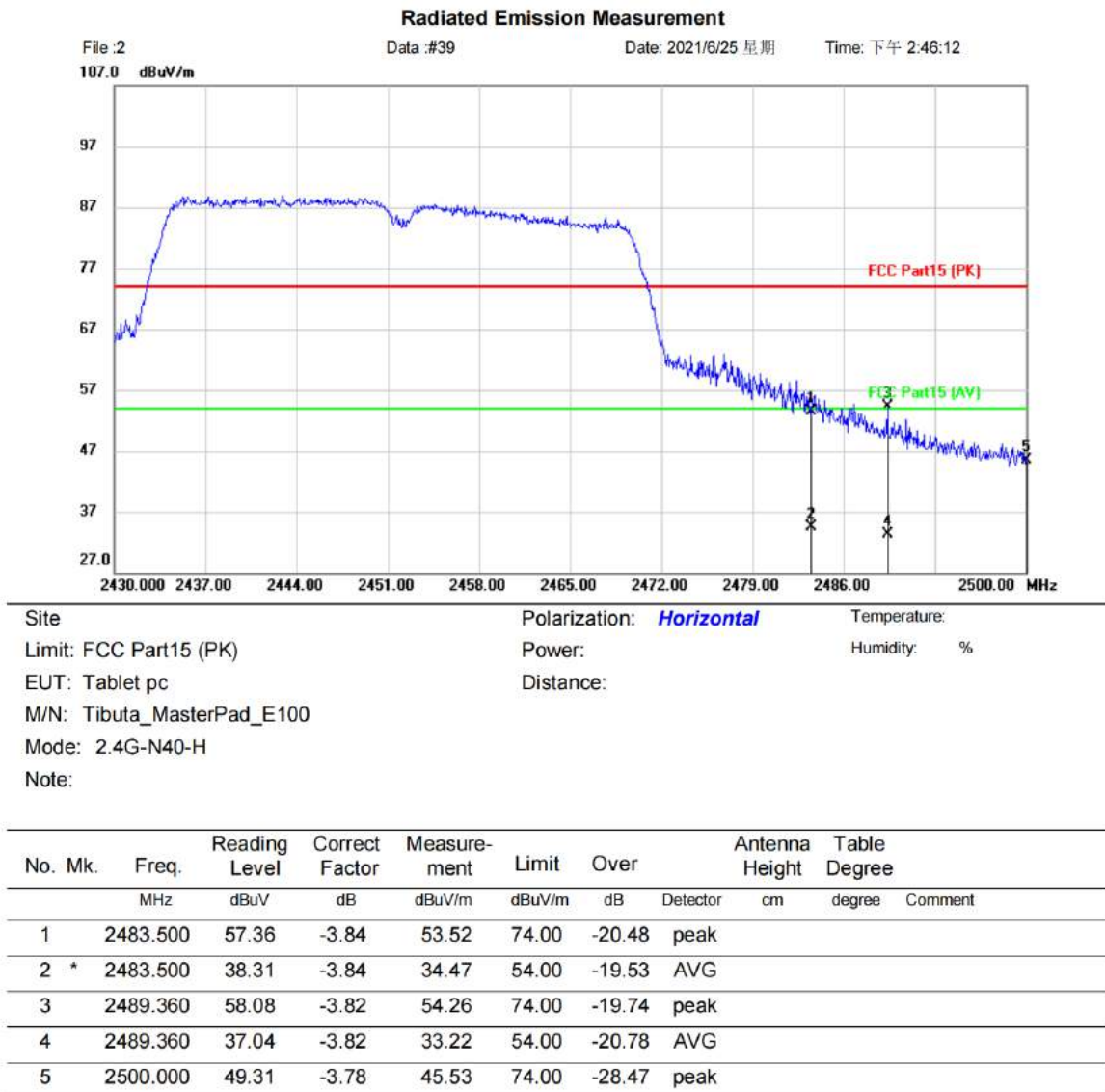


*:Maximum data x:Over limit !:over margin

◁Reference Only

Test Result: Pass

[TestMode: TX N40 high channel]; [Polarity: Horizontal]

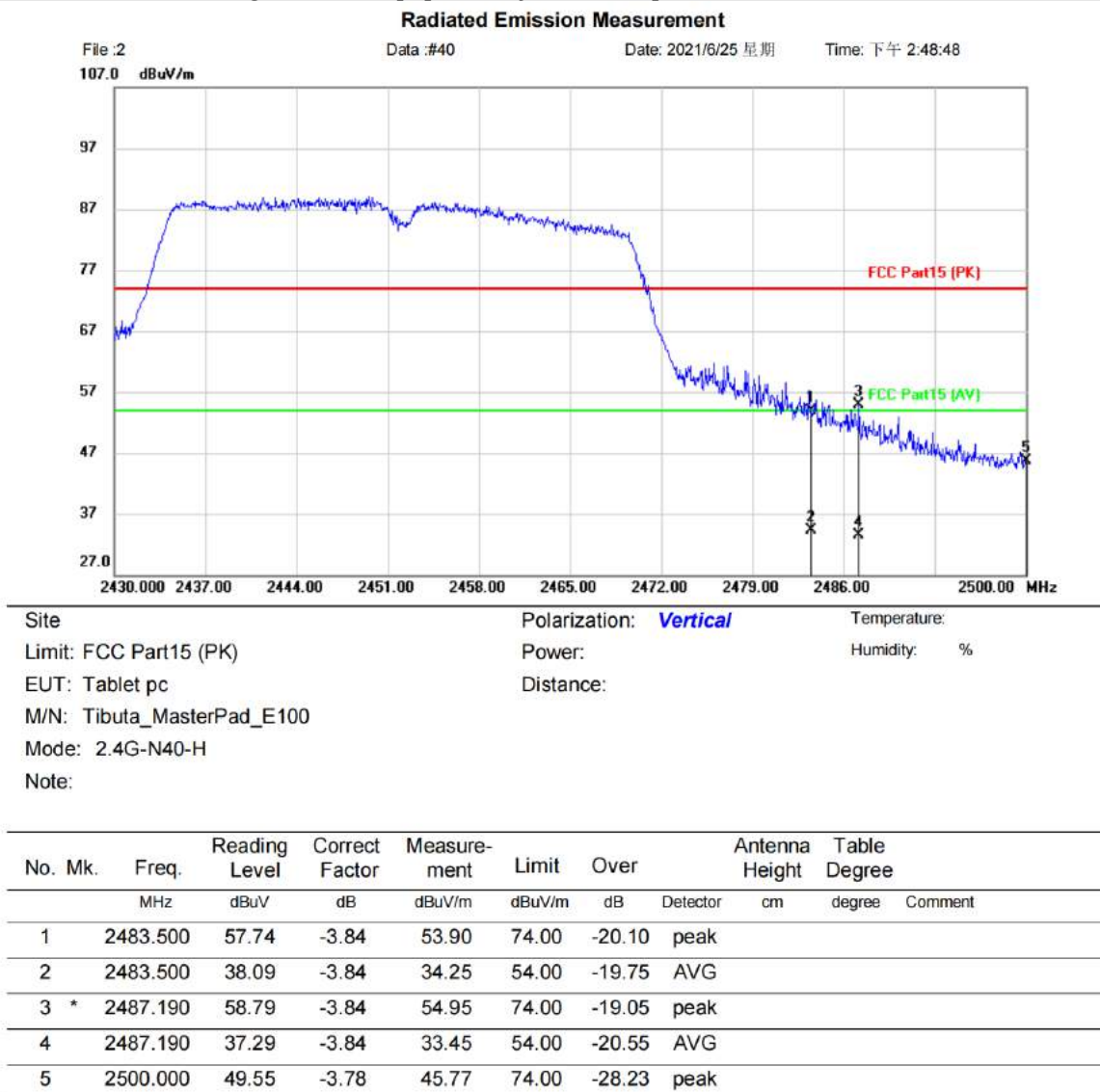


*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX N40 high channel]; [Polarity: Vertical]



*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

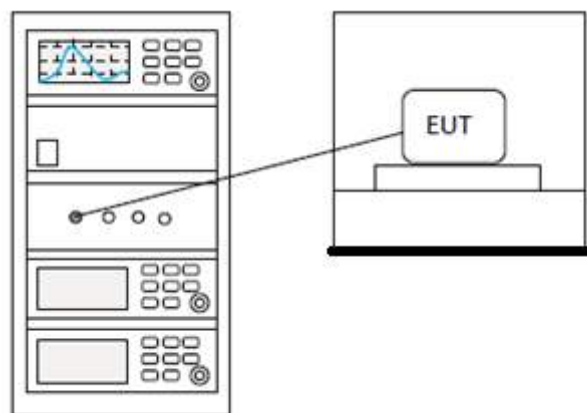
13 CONDUCTED SPURIOUS EMISSIONS

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 7.8.6 & Section 11.11
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Jozu
Temperature	25°C
Humidity	60%

13.1 LIMITS

Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. 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)).
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13.2 BLOCK DIAGRAM OF TEST SETUP



13.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

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14 CONDUCTED BAND EDGES MEASUREMENT

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 7.8.8 & Section 11.13.3.2
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Jozu
Temperature	25°C
Humidity	60%

14.1 LIMITS

Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. 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)).
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14.2 BLOCK DIAGRAM OF TEST SETUP

