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TEST REPORT

Product Name	:	Tablet pc
Brand Mark	:	tibuta
Model No.	:	T100
Extension mode	:	T101,T102
FCC ID	:	2AXUI-T100
Report Number	:	BLA-EMC-202106-A2502
Date of Sample Receipt	:	2021/6/8
Date of Test	:	2021/6/8 to 2021/7/22
Date of Issue	:	2021/7/22
Test Standard	:	47 CFR Part 15, Subpart C 15.247
Test Result	:	Pass

Prepared for:

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REPORT REVISE RECORD

Version No.	Date	Description
00	2021/7/22	Original



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1 TEST SUMMARY

Test item	Test Requirement	Test Method	Class/Severity	Result
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
Conducted Peak Output Power	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 47 CFR Part 15, Subpart C (2013) Section 47 CFR Part 15, Subpart C 7.8.5 & Section 15.247(b)(1) & 15.247(b)(3) 11.9.1 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
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



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.	T100		

3 GENERAL DESCRIPTION OF E.U.T.

Hardware Version 863A_MB_V5.1	
Software Version	Tibuta_MasterPad-T100_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:	1.62dBi



4 TEST ENVIRONMENT

Environment	Temperature	Voltage
Normal	25°C	DC3.7V

5 TEST MODE

TEST MODE	TEST MODE DESCRIPTION		
Transmitting mode Keep the EUT in continuously transmitting mode with modulation. (Duty cycle>			
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)	±4.34dB			
Radiated Emission(30Mz-1000MHz)	±4.24dB			
Radiated Emission(1GHz-18GHz)	±4.68dB			
AC Power Line Conducted Emission(150kHz-30MHz)	±3.45dB			



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 Power Spectrum Density					
Equipment	Manufacturer	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	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 Antenna Requirement					
Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due



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



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



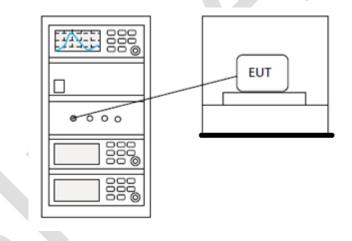
10 POWER SPECTRUM DENSITY

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 11.10.2
Test Mode (Pre-Scan)	ТХ
Test Mode (Final Test)	ТХ
Tester	Jozu
Temperature	25 ℃
Humidity	60%

10.1 LIMITS

Limit: ≤8dBm in any 3 kHz band during any time interval of continuous transmission

10.2 BLOCK DIAGRAM OF TEST SETUP



10.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details



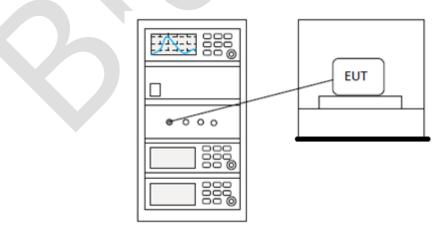
11 CONDUCTED PEAK OUTPUT POWER

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 7.8.5 & Section 11.9.1
Test Mode (Pre-Scan)	ТХ
Test Mode (Final Test)	ТХ
Tester	Jozu
Temperature	25℃
Humidity	60%
11.1 LIMITS	

11.1 LIMITS

-	
11.1 LIMITS	
Frequency range(MHz)	Output power of the intentional radiator(watt)
	1 for ≥50 hopping channels
902-928	0.25 for $25 \le$ hopping channels < 50
	1 for digital modulation
	1 for \geq 75 non-overlapping hopping channels
2400-2483.5	0.125 for all other frequency hopping systems
	1 for digital modulation
5775 5950	1 for frequency hopping systems and digital
5725-5850	modulation

11.2 BLOCK DIAGRAM OF TEST SETUP





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11.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details



12 CONDUCTED EMISSIONS AT AC POWER LINE (150KHZ-30MHZ)

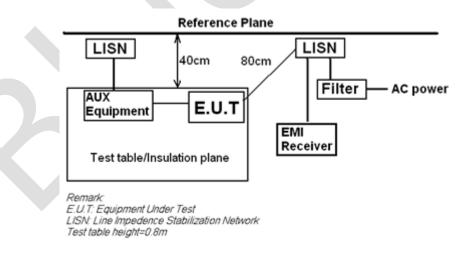
Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 6.2
Test Mode (Pre-Scan)	Transmitting mode
Test Mode (Final Test)	Transmitting mode
Tester	Jozu
Temperature	25°C
Humidity	60%

12.1 LIMITS

Frequency of	Conducted limit(dBµV)							
emission(MHz)	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.

12.2 BLOCK DIAGRAM OF TEST SETUP



12.3 PROCEDURE

1) The mains terminal disturbance voltage test was conducted in a shielded room.

2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50H + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.



3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,

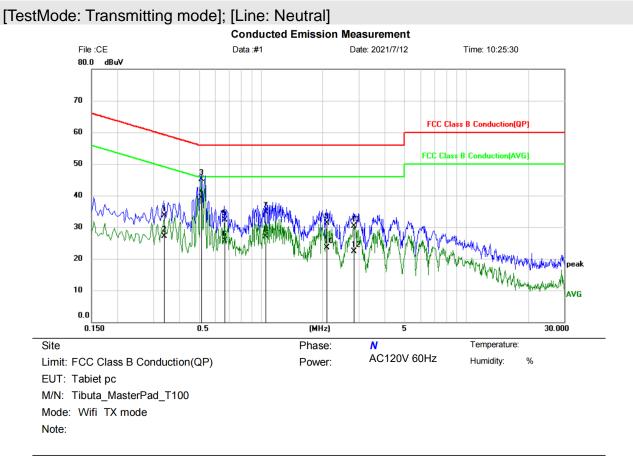
4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.

5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Remark: LISN=Read Level+ Cable Loss+ LISN Factor



12.4 TEST DATA

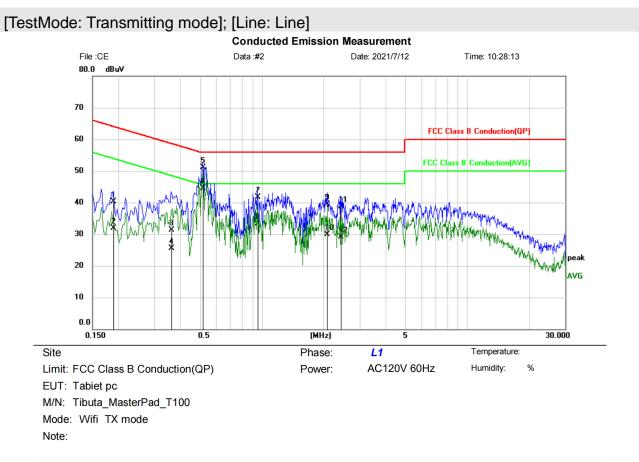


No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.3379	24.00	9.77	33.77	59.25	-25.48	QP	
2	0.3379	17.42	9.77	27.19	49.25	-22.06	AVG	
3	0.5140	35.28	9.79	45.07	56.00	-10.93	QP	
4 *	0.5140	29.49	9.79	39.28	46.00	-6.72	AVG	
5	0.6660	22.41	9.81	32.22	56.00	-23.78	QP	
6	0.6660	15.80	9.81	25.61	46.00	-20.39	AVG	
7	1.0540	24.79	9.84	34.63	56.00	-21.37	QP	
8	1.0540	17.30	9.84	27.14	46.00	-18.86	AVG	
9	2.0940	21.54	9.86	31.40	56.00	-24.60	QP	
10	2.0940	13.59	9.86	23.45	46.00	-22.55	AVG	
11	2.8260	20.40	9.89	30.29	56.00	-25.71	QP	
12	2.8260	12.43	9.89	22.32	46.00	-23.68	AVG	

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

Reference Only





No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1900	30.52	9.83	40.35	64.04	-23.69	QP	
2	0.1900	22.03	9.83	31.86	54.04	-22.18	AVG	
3	0.3620	21.36	9.85	31.21	58.68	-27.47	QP	
4	0.3620	15.66	9.85	25.51	48.68	-23.17	AVG	
5	0.5180	41.22	9.87	51.09	56.00	-4.91	QP	
6 *	0.5180	34.63	9.87	44.50	46.00	-1.50	AVG	
7	0.9540	31.85	9.92	41.77	56.00	-14.23	QP	
8	0.9540	23.35	9.92	33.27	46.00	-12.73	AVG	
9	2.0780	29.60	9.94	39.54	56.00	-16.46	QP	
10	2.0780	20.05	9.94	29.99	46.00	-16.01	AVG	
11	2.4260	28.67	9.95	38.62	56.00	-17.38	QP	
12	2.4260	19.19	9.95	29.14	46.00	-16.86	AVG	

(Reference Only



13 ANTENNA REQUIREMENT

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

13.1 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 a 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 1.62dBi.





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)	ТХ
Test Mode (Final Test)	ТХ
Tester	Jozu
Temperature	25 ℃
Humidity	60%

14 RADIATED SPURIOUS EMISSIONS

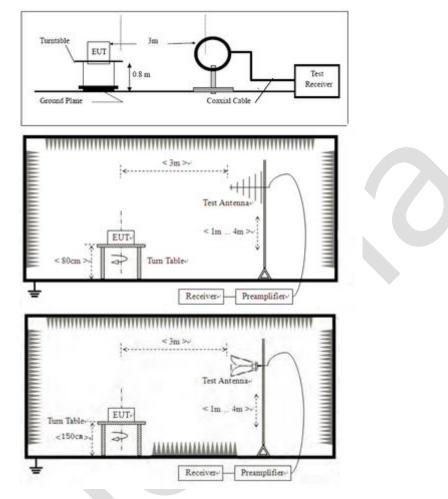
14.1 LIMITS

Frequency(MHz)	Field	Measurement
(init)	strength(microvolts/meter)	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.



14.2 BLOCK DIAGRAM OF TEST SETUP



14.3 PROCEDURE

a. 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.

b. 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.

c. 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.

d. 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.

e. 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.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. 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

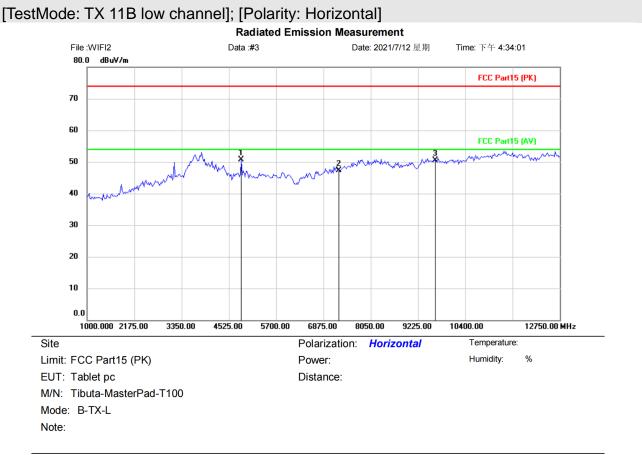
3) Scan from 9kHz to 25GHz, the disturbance above 12.75GHz and below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 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.



14.4 TEST DATA

Remark: During the test, pre-scan the 802.11b/g/n mode, and found the 802.11b mode which it is worse case.



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4824.000	47.16	3.62	50.78	74.00	-23.22	peak			
2		7236.000	41.19	6.07	47.26	74.00	-26.74	peak			
3		9648.000	41.04	9.37	50.41	74.00	-23.59	peak			

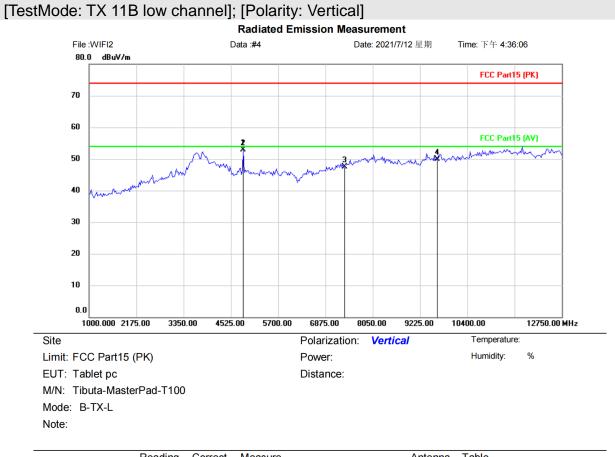
*:Maximum data x:Over limit !:over margin

Reference Only



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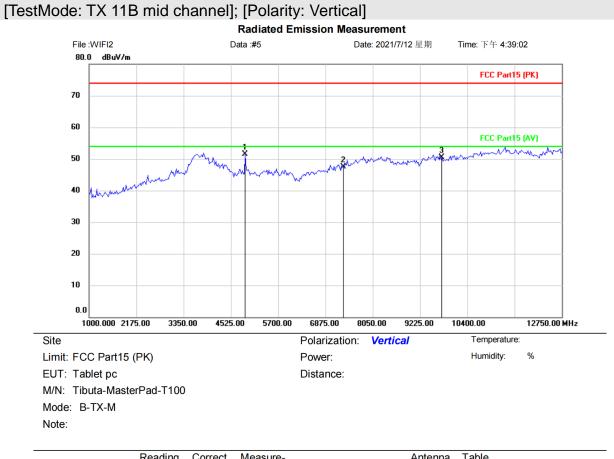




	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
_	1	*	4824.000	49.35	3.62	52.97	74.00	-21.03	peak			
_	2		4830.500	49.39	3.58	52.97	74.00	-21.03	peak			
_	3		7326.000	41.16	6.44	47.60	74.00	-26.40	peak			
_	4		9648.000	40.50	9.37	49.87	74.00	-24.13	peak			

Reference Only

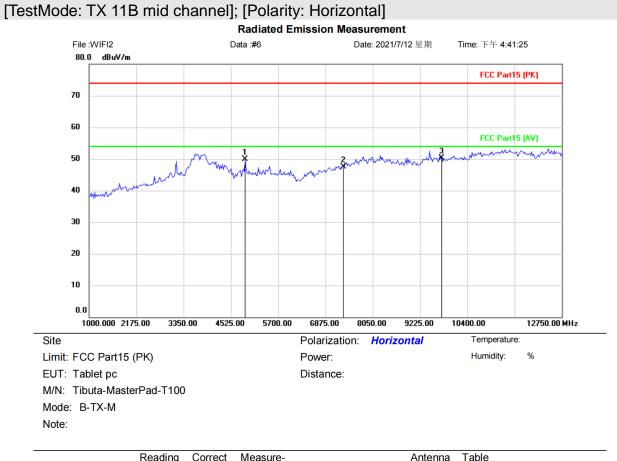




No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4877.500	48.08	3.37	51.45	74.00	-22.55	peak			
2		7311.000	41.14	6.37	47.51	74.00	-26.49	peak			
3		9748.000	40.86	9.59	50.45	74.00	-23.55	peak			

Reference Only

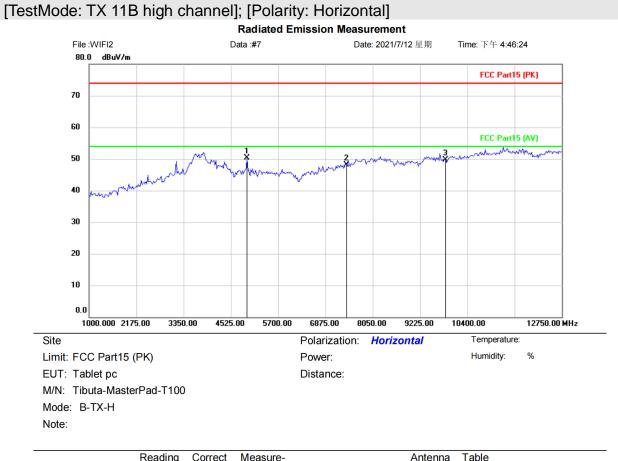




N	o. MI	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
	1	4877.500	46.57	3.37	49.94	74.00	-24.06	peak			
	2	7311.000	41.08	6.37	47.45	74.00	-26.55	peak			
	3 *	9748.000	40.63	9.59	50.22	74.00	-23.78	peak			

Reference Only

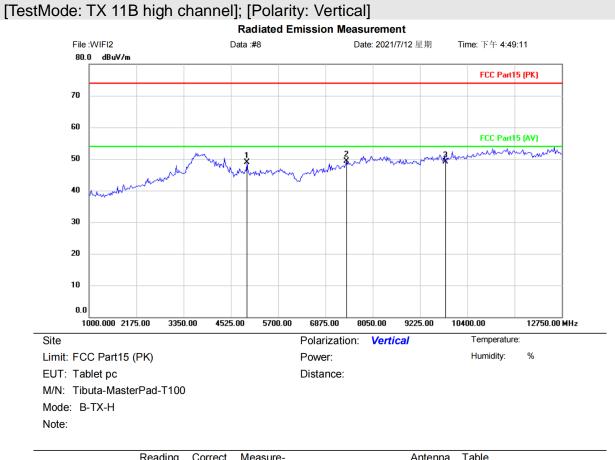




No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4924.500	46.92	3.47	50.39	74.00	-23.61	peak			
2		7386.000	41.46	6.68	48.14	74.00	-25.86	peak			
3		9848.000	39.76	9.88	49.64	74.00	-24.36	peak			

Reference Only

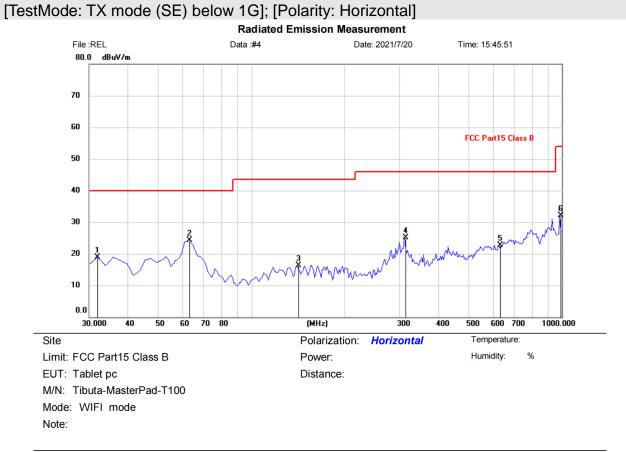




No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4924.000	45.39	3.46	48.85	74.00	-25.15	peak			
2	*	7386.000	42.65	6.68	49.33	74.00	-24.67	peak			
3		9848.000	39.16	9.88	49.04	74.00	-24.96	peak			

Reference Only

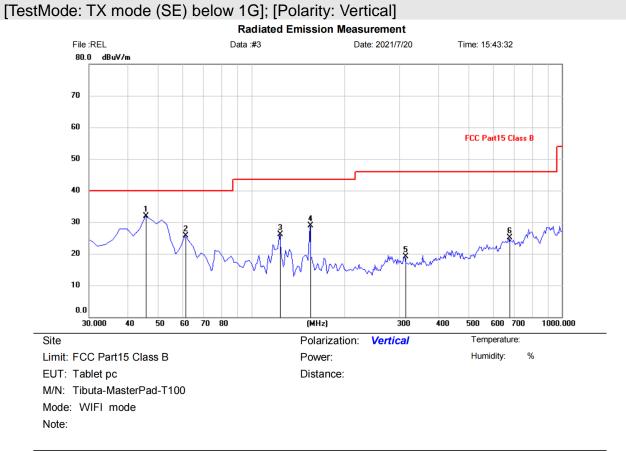




No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		31.9438	39.25	-20.29	18.96	40.00	-21.04	QP			
2	*	63.0461	44.12	-19.90	24.22	40.00	-15.78	QP			
3		140.8015	35.45	-19.06	16.39	43.50	-27.11	QP			
4		311.8636	43.18	-18.06	25.12	46.00	-20.88	QP			
5		630.6612	33.31	-10.54	22.77	46.00	-23.23	QP			
6		986.3927	37.40	-5.37	32.03	54.00	-21.97	QP			

Reference Only





No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	45.5511	50.84	-18.89	31.95	40.00	-8.05	QP			
2		61.1022	45.22	-19.49	25.73	40.00	-14.27	QP			
3		123.3066	45.81	-19.75	26.06	43.50	-17.44	QP			
4		154.4088	48.04	-19.17	28.87	43.50	-14.63	QP			
5		311.8637	37.23	-18.06	19.17	46.00	-26.83	QP			
6		677.3146	35.31	-10.16	25.15	46.00	-20.85	QP			

Reference Only



15 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)	ТХ						
Test Mode (Final Test)	ТХ						
Tester	Jozu						
Temperature	25°C						
Humidity	60%						

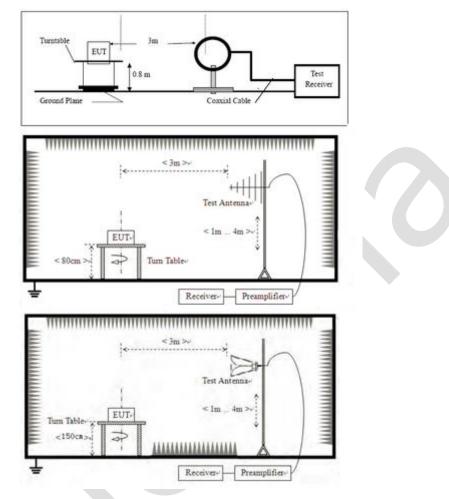
15.1 LIMITS

15.1 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.



15.2 BLOCK DIAGRAM OF TEST SETUP



15.3 PROCEDURE

a. 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.

b. 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.

c. 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.

d. 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.

e. 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.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. 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.

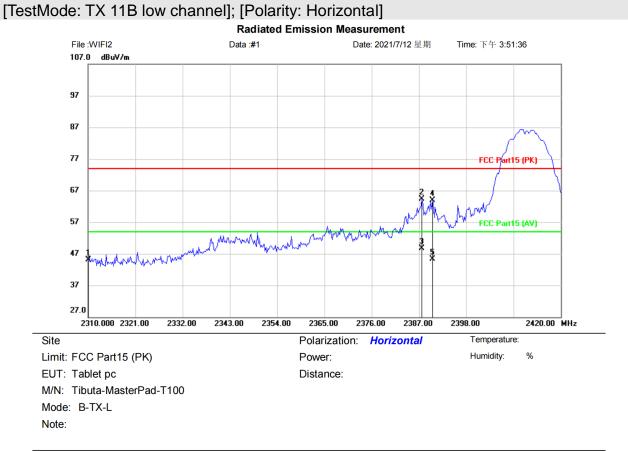
j. Repeat above procedures until all frequencies measured was complete.

Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- 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.



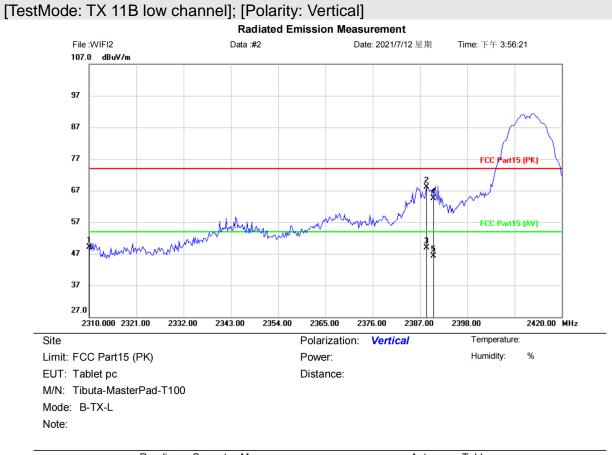
15.4 TEST DATA



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2310.000	49.79	-4.61	45.18	74.00	-28.82	peak			
2		2387.660	68.62	-4.29	64.33	74.00	-9.67	peak			
3	*	2387.660	53.03	-4.29	48.74	54.00	-5.26	AVG			
4		2390.000	68.10	-4.27	63.83	74.00	-10.17	peak			
5		2390.000	49.48	-4.27	45.21	54.00	-8.79	AVG			

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

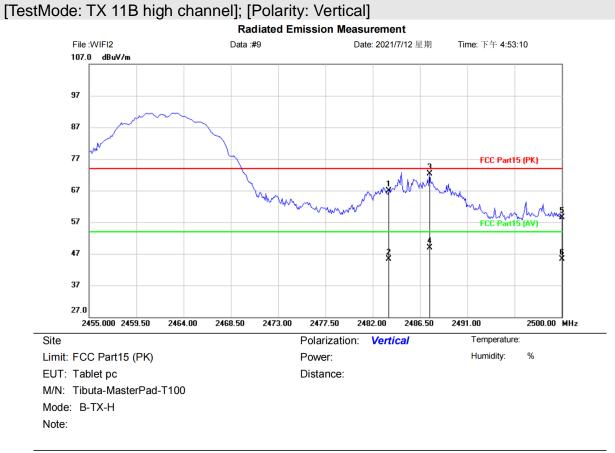




No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2310.000	53.71	-4.61	49.10	74.00	-24.90	peak			
2		2388.540	72.44	-4.29	68.15	74.00	-5.85	peak			
3	*	2388.540	53.25	-4.29	48.96	54.00	-5.04	AVG			
4		2390.000	68.68	-4.27	64.41	74.00	-9.59	peak			
5		2390.000	50.61	-4.27	46.34	54.00	-7.66	AVG			

Reference Only

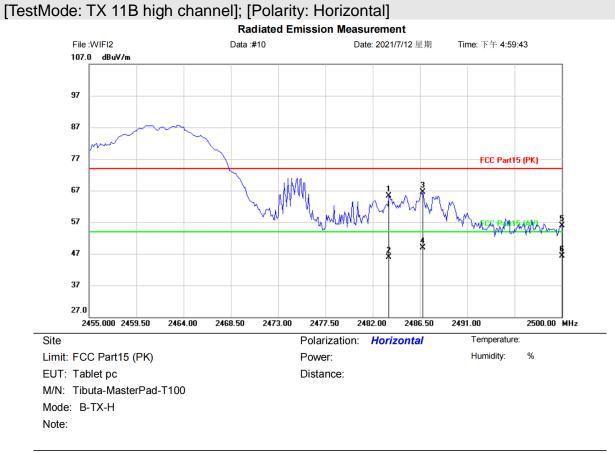




No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	70.76	-3.84	66.92	74.00	-7.08	peak			
2		2483.500	49.09	-3.84	45.25	54.00	-8.75	AVG			
3	*	2487.400	76.15	-3.84	72.31	74.00	-1.69	peak			
4		2487.400	52.80	-3.84	48.96	54.00	-5.04	AVG			
5		2500.000	62.33	-3.78	58.55	74.00	-15.45	peak			
6		2500.000	49.15	-3.78	45.37	54.00	-8.63	AVG			

Reference Only

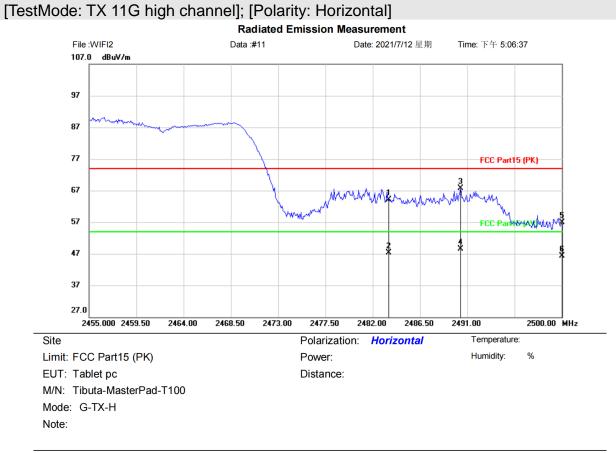




No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	69.05	-3.84	65.21	74.00	-8.79	peak			
2		2483.500	49.82	-3.84	45.98	54.00	-8.02	AVG			
3		2486.770	70.35	-3.84	66.51	74.00	-7.49	peak			
4	*	2486.770	52.71	-3.84	48.87	54.00	-5.13	AVG			
5		2500.000	59.76	-3.78	55.98	74.00	-18.02	peak			
6		2500.000	50.12	-3.78	46.34	54.00	-7.66	AVG			

Reference Only

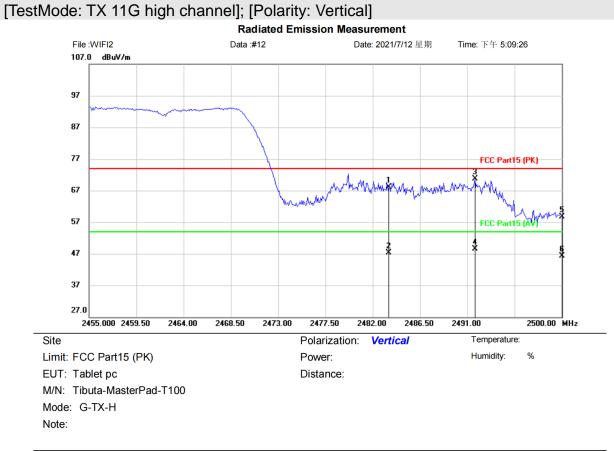




No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	67.88	-3.84	64.04	74.00	-9.96	peak			
2		2483.500	51.17	-3.84	47.33	54.00	-6.67	AVG			
3		2490.370	71.56	-3.81	67.75	74.00	-6.25	peak			
4	*	2490.370	52.38	-3.81	48.57	54.00	-5.43	AVG			
5		2500.000	60.72	-3.78	56.94	74.00	-17.06	peak			
6		2500.000	50.03	-3.78	46.25	54.00	-7.75	AVG			

Reference Only

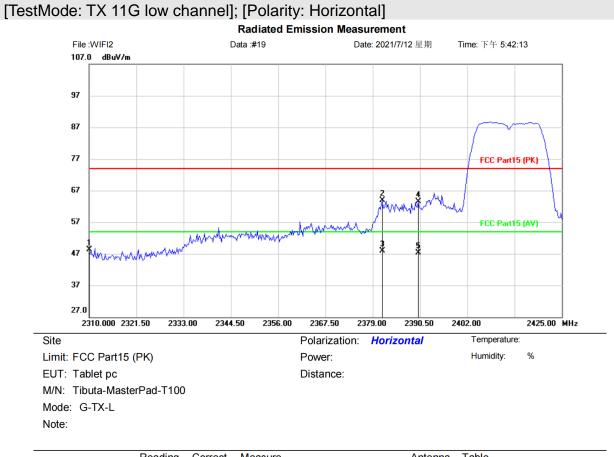




No. N	Иk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	71.88	-3.84	68.04	74.00	-5.96	peak			
2		2483.500	51.23	-3.84	47.39	54.00	-6.61	AVG			
3*	*	2491.720	74.49	-3.81	70.68	74.00	-3.32	peak			
4		2491.720	52.40	-3.81	48.59	54.00	-5.41	AVG			
5		2500.000	62.58	-3.78	58.80	74.00	-15.20	peak			
6		2500.000	50.12	-3.78	46.34	54.00	-7.66	AVG			

Reference Only

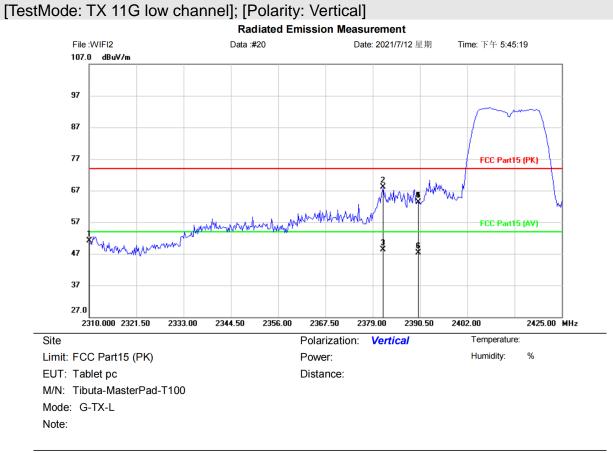




No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2310.000	53.00	-4.61	48.39	74.00	-25.61	peak			
2		2381.300	68.18	-4.32	63.86	74.00	-10.14	peak			
3	*	2381.300	52.28	-4.32	47.96	54.00	-6.04	AVG			
4		2390.000	67.82	-4.27	63.55	74.00	-10.45	peak			
5		2390.000	51.61	-4.27	47.34	54.00	-6.66	AVG			

Reference Only

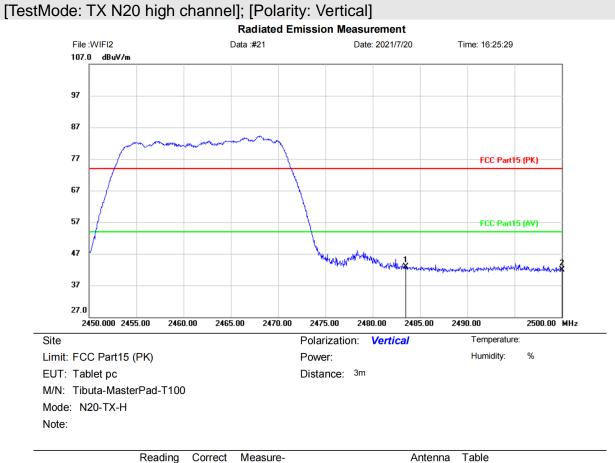




No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2310.000	55.62	-4.61	51.01	74.00	-22.99	peak			
2		2381.530	72.51	-4.32	68.19	74.00	-5.81	peak			
3	*	2381.530	52.71	-4.32	48.39	54.00	-5.61	AVG			
4		2390.000	67.57	-4.27	63.30	74.00	-10.70	peak			
5		2390.000	67.57	-4.27	63.30	74.00	-10.70	peak			
6		2390.000	51.56	-4.27	47.29	54.00	-6.71	AVG			

Reference Only

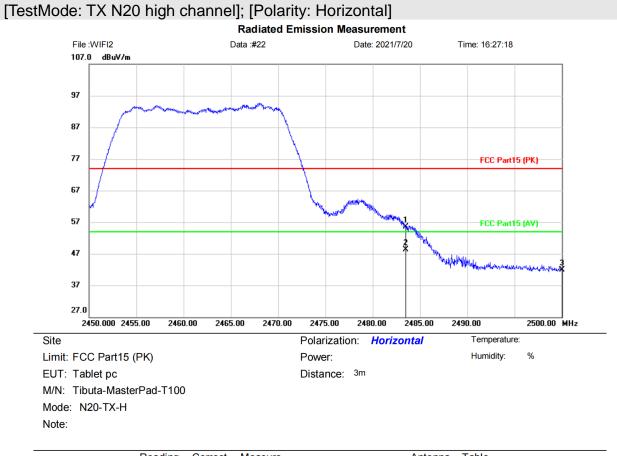




No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment		Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2483.500	46.71	-3.84	42.87	74.00	-31.13	peak			
2		2500.000	45.76	-3.78	41.98	74.00	-32.02	peak			

Reference Only

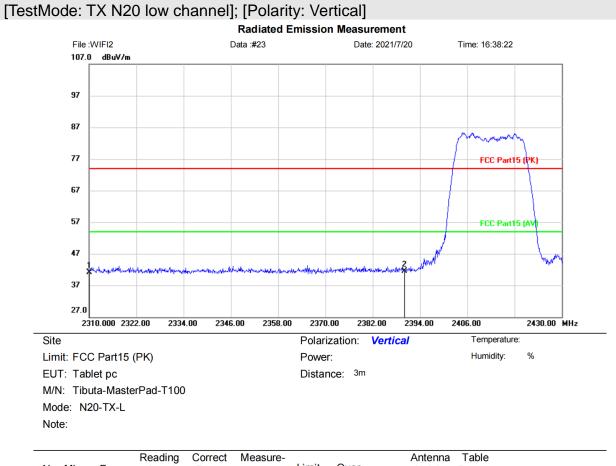




	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
_	1		2483.500	59.37	-3.84	55.53	74.00	-18.47	peak			
_	2	*	2483.500	52.20	-3.84	48.36	54.00	-5.64	AVG			
_	3		2500.000	45.63	-3.78	41.85	74.00	-32.15	peak			

Reference Only

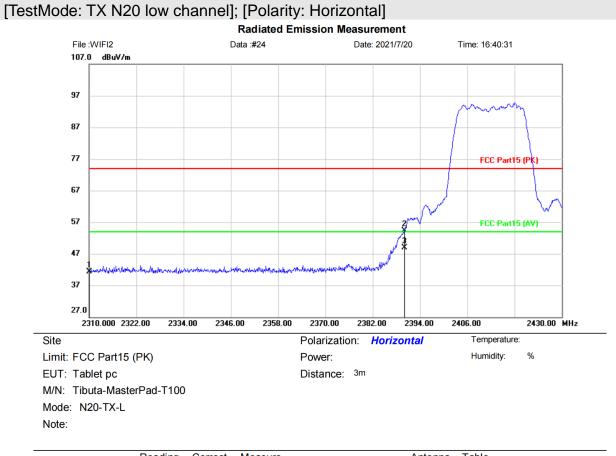




	No.	Mk.	Freq.	Level	Factor	measure- ment	Limit	Over		Antenna Height	l able Degree	
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
_	1		2310.000	45.75	-4.61	41.14	74.00	-32.86	peak			
	2	*	2390.000	45.74	-4.27	41.47	74.00	-32.53	peak			

Reference Only

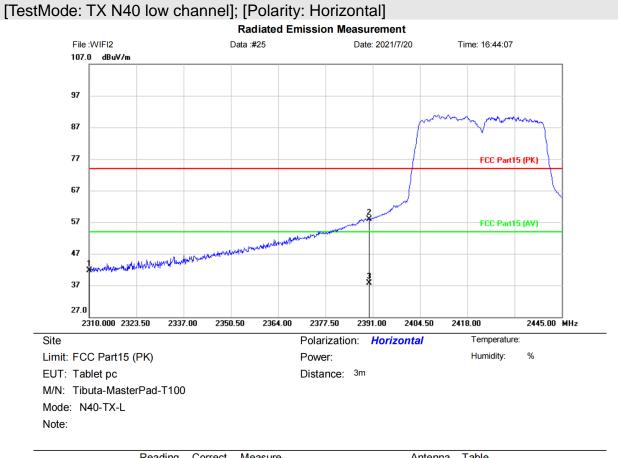




No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2310.000	45.91	-4.61	41.30	74.00	-32.70	peak			
2		2390.000	58.55	-4.27	54.28	74.00	-19.72	peak			
3	*	2390.000	53.23	-4.27	48.96	54.00	-5.04	AVG			

Reference Only

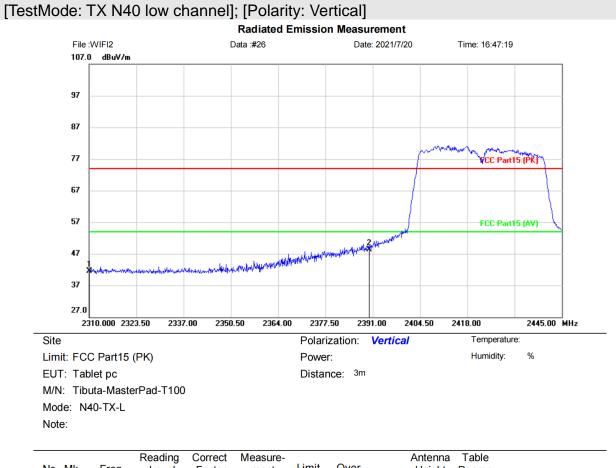




	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
_	1		2310.000	46.39	-4.61	41.78	74.00	-32.22	peak			
_	2	*	2390.000	62.18	-4.27	57.91	74.00	-16.09	peak			
_	3		2390.000	42.06	-4.27	37.79	54.00	-16.21	AVG			

Reference Only

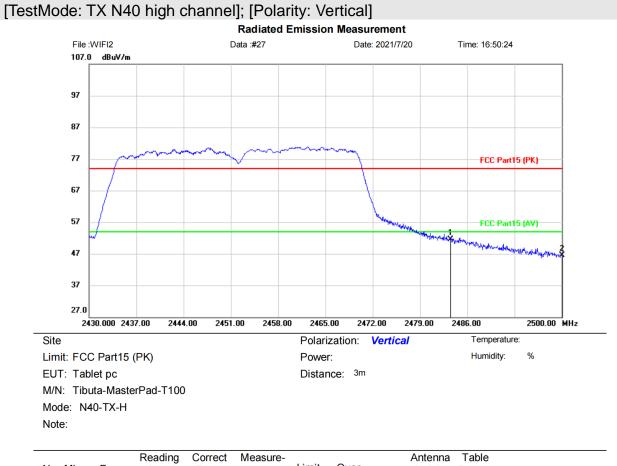




No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2310.000	46.16	-4.61	41.55	74.00	-32.45	peak			
2	*	2390.000	52.66	-4.27	48.39	74.00	-25.61	peak			

Reference Only

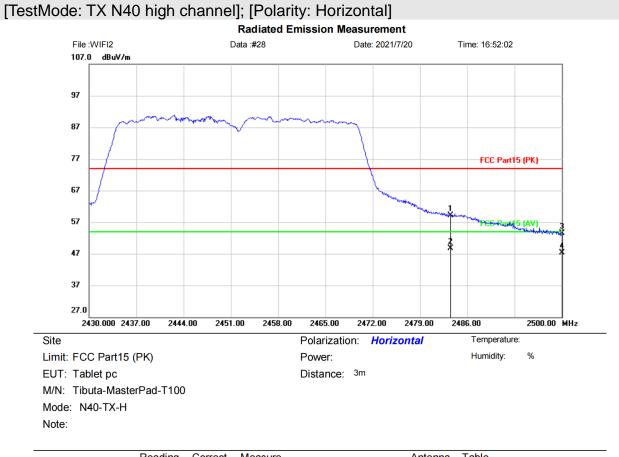




	No.	Mk.	Freq.		Factor	measure-	Limit	Over			Degree	
_			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
_	1	*	2483.500	55.42	-3.84	51.58	74.00	-22.42	peak			
_	2		2500.000	50.36	-3.78	46.58	74.00	-27.42	peak			

Reference Only





	No.	Mk	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
_	1		2483.500	62.89	-3.84	59.05	74.00	-14.95	peak			
	2	*	2483.500	52.61	-3.84	48.77	54.00	-5.23	AVG			
	3		2500.000	57.32	-3.78	53.54	74.00	-20.46	peak			
	4		2500.000	51.13	-3.78	47.35	54.00	-6.65	AVG			

Reference Only



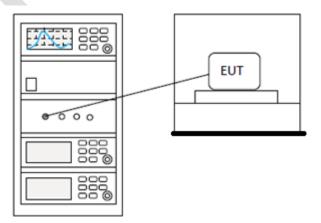
Test Standard47 CFR Part 15, Subpart C 15.247Test MethodANSI C63.10 (2013) Section 7.8.6 & Section 11.11Test Mode (Pre-Scan)TXTest Mode (Final Test)TXTesterJozuTemperature25 °CHumidity60%

16 CONDUCTED SPURIOUS EMISSIONS

16.1 LIMITS

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)).

16.2 BLOCK DIAGRAM OF TEST SETUP



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16.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details



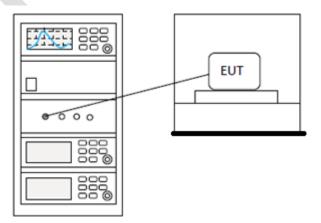
Test Standard	47 CFR Part 15, Subpart C 15.247						
Test Method	ANSI C63.10 (2013) Section 7.8.8 & Section 11.13.3.2						
Test Mode (Pre-Scan)	ТХ						
Test Mode (Final Test)	ТХ						
Tester	Jozu						
Temperature	25 ℃						
Humidity	60%						

17 CONDUCTED BAND EDGES MEASUREMENT

17.1 LIMITS

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 §15.209(a) (see §15.205(c)).

17.2 BLOCK DIAGRAM OF TEST SETUP





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17.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details



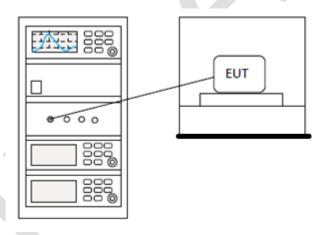
18 MINIMUM 6DB BANDWIDTH

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 11.8.1
Test Mode (Pre-Scan)	ТХ
Test Mode (Final Test)	ТХ
Tester	Jozu
Temperature	25 ℃
Humidity	60%

18.1 LIMITS

Limit: \geq 500 kHz

18.2 BLOCK DIAGRAM OF TEST SETUP



18.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details