

# FCC RADIO TEST REPORT FCC ID: 2A7DX-TAB60PRO

Product: Tablet PC

Trade Mark: Blackview

Model Name: Tab 60 Pro

Family Model: N/A

Report No.: S24090504302004

Issue Date: Nov. 18, 2024

# **Prepared for**

DOKE COMMUNICATION (HK) LIMITED

19H MAXGRAND PLAZA NO 3 TAI YAU STREET SAN PO KONG KL

# Prepared by

Shenzhen NTEK Testing Technology Co., Ltd.
No. 24 Xinfa East Road, Xiangshan Community, Xinqiao Street,
Baoan District, Shenzhen, Guangdong, People's Republic of China
Tel. 0755-23200050 Website:http://www.ntek.org.cn

Version.1.2 Page 1 of 55



## TEST RESULT CERTIFICATION

Applicant's name ...... DOKE COMMUNICATION (HK) LIMITED

Address ...... 19H MAXGRAND PLAZA NO 3 TAI YAU STREET SAN PO KONG KL

Manufacturer's Name.....: Shenzhen DOKE Electronic Co., Ltd

Address ...... 801, Building3, 7th Industrial Zone, Yulv Community, Yutang Road,

Guangming District, Shenzhen, China.

**Product description** 

Product name.....: Tablet PC Model and/or type reference : Tab 60 Pro

Family Model ..... N/A

Sample number S240905043003 Standards ...... FCC Part15.407

Test procedure ...... ANSI C63.10-2013 and KDB 789033 D02 General UNII Test

Procedures New Rules v02r01

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements/ the Industry Canada requirements.. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of NTEK, this document may be altered or revised by NTEK, personnel only, and shall be noted in the revision of the document.

Date of Test .....

Date (s) of performance of tests ...... Sept. 05, 2024 ~ Nov. 18, 2024

Date of Issue...... Nov. 18, 2024

Test Result......Pass

Prepared

(Project Engineer)

(Supervisor)

Approved . By

(Manager)

Version.1.2 Page 2 of 55



# **Table of Contents**

	Page
1 . SUMMARY OF TEST RESULTS	5
1.1 FACILITIES AND ACCREDITATIONS	6
1.2 MEASUREMENT UNCERTAINTY	6
2 . GENERAL INFORMATION	7
	-
2.1 GENERAL DESCRIPTION OF EUT	7
2.2 DESCRIPTION OF TEST MODES	9
2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTE	D 10
2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)	11
2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS	12
3. TEST REQUIREMENTS	14
3.1 CONDUCTED EMISSION MEASUREMENT	14
3.2 RADIATED EMISSION MEASUREMENT	19
3.3 POWER SPECTRAL DENSITY TEST	34
3.4 26DB & 99% EMISSION BANDWIDTH	37
3.5 MINIMUM 6 DB BANDWIDTH	39
3.6 MAXIMUM CONDUCTED OUTPUT POWER	41
3.7 OUT OF BAND EMISSIONS	45
3.8 SPURIOUS RF CONDUCTED EMISSIONS	47
3.9 FREQUENCY STABILITY MEASUREMENT	48
4. ANTENNA REQUIREMENT	55
4.1 STANDARD REQUIREMENT	55
Δ 2 FIIT ANTENNA	55

Version.1.2 Page 3 of 55



# **Revision History**

	1		
Report No.	Version	Description	Issued Date
S24090504302004	Rev.01	Initial issue of report	Nov. 18, 2024

Version.1.2 Page 4 of 55

# 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

	FCC Part15 (15.407) , Subpart E		
Standard Section	Test Item	Judgment	Remark
15.207	AC Power Line Conducted Emissions	PASS	
15.209(a), 15.407 (b)(1) 15.407 (b)(4)	Spurious Radiated Emissions	PASS	
15.407 (a)(1) 15.407 (a)(3)	26 dB and 99% Emission Bandwidth	PASS	
15.407(e)	Minimum 6 dB bandwidth	PASS	
15.407 (a)(1) 15.407 (a)(3)	Maximum Conducted Output Power	PASS	
15.407(b)(1) 15.407(b)(4)	Band Edge	PASS	
15.407 (a)(1) 15.407 (a)(3)	Power Spectral Density	PASS	
15.407(b)	Spurious Emissions at Antenna Terminals	PASS	
15.203	Antenna Requirement	PASS	
15.407(c)	Automatically discontinue transmission	PASS	

# NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

Version.1.2 Page 5 of 55

#### 1.1 FACILITIES AND ACCREDITATIONS

#### **FACILITIES**

All measurement facilities used to collect the measurement data are located at

No. 24 Xinfa East Road, Xiangshan Community, Xinqiao Street, Baoan District, Shenzhen,

Guangdong, People's Republic of China.

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.10 and CISPR Publication 22.

#### LABORATORY ACCREDITATIONS AND LISTINGS

Site Description

CNAS-Lab. : The Certificate Registration Number is L5516. IC-Registration The Certificate Registration Number is 9270A.

CAB identifier: CN0074

FCC- Accredited Test Firm Registration Number: 463705.

**Designation Number: CN1184** 

A2LA-Lab. The Certificate Registration Number is 4298.01

This laboratory is accredited in accordance with the recognized

International Standard ISO/IEC 17025:2005 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 8 January 2009).

Name of Firm : Shenzhen NTEK Testing Technology Co., Ltd.

Site Location : No. 24 Xinfa East Road, Xiangshan Community, Xinqiao Street, Baoan

District, Shenzhen, Guangdong, People's Republic of China.

#### 1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y±U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission Test	±2.80dB
2	RF power, conducted	±0.16dB
3	Spurious emissions, conducted	±0.21dB
4	All emissions, radiated(30MHz~1GHz)	±2.64dB
5	All emissions, radiated(1GHz~6GHz)	±2.40dB
6	All emissions, radiated( > 6GHz)	±2.52dB
7	Temperature	±0.5°C
8	Humidity	±2%
9	All emissions, radiated(9KHz~30MHz)	±6dB

Version.1.2 Page 6 of 55



# 2. GENERAL INFORMATION

# 2.1 GENERAL DESCRIPTION OF EUT

GENERAL DESC	KIP HON OF EUT			
Equipment	Tablet PC			
Trade Mark	Blackview			
Model Name	Tab 60 Pro			
Family Model	N/A			
Model Difference	N/A			
FCC ID	2A7DX-TAB60PRO			
	IEEE 802.11 WLAN Mode Supported  Data Rate	■802.11a/n/ac (20MHz channel bandwidth) ■802.11n/ac (40MHz channel bandwidth) ■802.11ac (80MHz channel bandwidth) 802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40):MCS0-MCS15; 802.11ac(VHT20):MCS0-MCS8; 802.11ac(VHT40/VHT80):MCS0-MCS9;		
	Modulation	OFDM with BPSK/QPSK/16QAM/64QAM/256QAM for 802.11a/n/ac;		
Product Description	Operating Frequency Range			
	Number of Channels			
	Antenna Type	PIFA Antenna		
	Manual, More details User's Manual.	band I: -1.3dBi; band IV: -1.3dBi ation, features, or specification exhibited in User's s of EUT technical specification, please refer to the		
Adapter	Model: QZ-01004AA Input: 100-240V~50A Output: 5.0V—-2.0A	/60Hz 0.3A		
Battery	DC 3.85V, 7700mAh	n, 29.645Wh		
Power supply	DC 3.85V from batte	ery or DC 5V from adapter		
Connecting I/O Port(s)	Please refer to the L	Please refer to the User's Manual		
HW Version	S866_9230SMB_D4	IUF_V1.0		
SW Version	Tab60Pro_NEU_DK	086_V1.0		

Version.1.2 Page 7 of 55



Note:

- 1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- 2. Frequency and Channel list for 802.11a/n/ac(20MHz) band I (5180-5240MHz):

	802.11a/n/ac( 20MHz) Carrier Frequency Channel						
	Frequen		Frequen		Frequen		Frequen
Channel	су	Channel	су	Channel	су	Channel	су
	(MHz)		(MHz)		(MHz)		(MHz)
36	5180	44	5220	-	-	-	-
40	5200	48	5240	-	-	-	-

Frequency and Channel list for 802.11n/ac(40MHz) band I (5190-5230MHz):

	80	02.11n/ac(4	ŀ0MHz) Car	rier Freque	ncy Chann	el	
	Frequen		Frequen		Frequen		Frequen
Channel	су	Channel	су	Channel	су	Channel	су
	(MHz)		(MHz)		(MHz)		(MHz)
38	5190	-	-	-	-	-	-
46	5230	-	-	-	-	-	-

Frequency and Channel list for 802.11ac(80MHz) band I (5210MHz):

	802.11ac(80MHz) Carrier Frequency Channel						
Channel	Frequen cy (MHz)	Channel	Frequen cy (MHz)	Channel	Frequen cy (MHz)	Channel	Frequen cy (MHz)
42	5210	-	-	-	-	-	-

Frequency and Channel list for 802.11a/n/ac(20 MHz) band IV (5745-5825MHz):

	802.11a/n/ac( 20 MHz) Carrier Frequency Channel						
	Frequen		Frequen		Frequen		Frequen
Channel	су	Channel	су	Channel	су	Channel	су
	(MHz)		(MHz)		(MHz)		(MHz)
149	5745	153	5765	157	5785	161	5805
165	5825	-	-	-	-	-	-

Frequency and Channel list for 802.11n/ac(40MHz) band IV (5755-5795MHz):

	802.11n	/ac(40MHz) (	Carrier Frequenc	cy Channel	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795	-	-

Frequency and Channel list for 802.11ac(80MHz) band IV (5775MHz):

	802.11	ac(80MHz) C	arrier Frequency	y Channel	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
155	5775			-	-

Version.1.2 Page 8 of 55



## 2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	Normal Link Mode
Mode 2	802.11a / n 20 /ac 20 CH36/ CH40/ CH 48 802.11a / n 20 / ac 20 CH149/ CH157/ CH 165
Mode 3	802.11n40 / ac40 CH38/ CH 46 802.11n 40 / ac 40 CH 151 / CH 159
Mode 4	802.11ac80 CH 42 802.11ac 80 CH 155

For Radiated Emission			
Final Test Mode Description			
Mode 1 Normal Link Mode			
Mode 2	802.11a / n 20 /ac 20 CH36/ CH40/ CH 48 802.11a / n 20 / ac 20 CH149/ CH157/ CH 165		
Mode 3	802.11n40 / ac40 CH38/ CH 46 802.11n 40 / ac 40 CH 151 / CH 159		
Mode 4	802.11ac80 CH 42 802.11ac 80 CH 155		

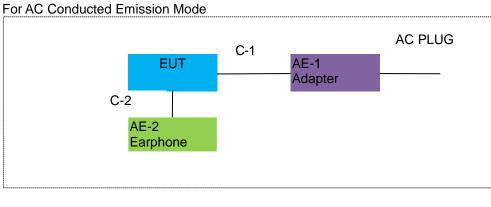
## Note:

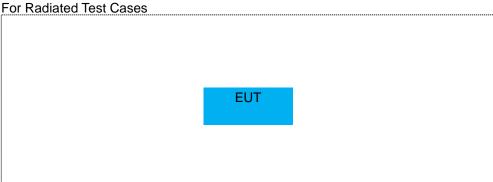
- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported

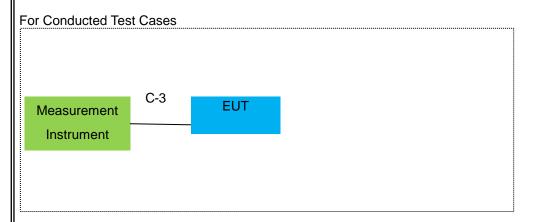
Version.1.2 Page 9 of 55



# 2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED







Note: 1.The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.

2. EUT built-in battery-powered, the battery is fully-charged.

Version.1.2 Page 10 of 55

# 2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Model/Type No.	Series No.	Note
AE-1	Adapter	QZ-01004AA00	N/A	Peripherals
AE-2	Earphone	N/A	N/A	Peripherals

Item	Cable Type	Shielded Type	Ferrite Core	Length
C-1	USB Cable	YES	NO	1.0m
C-2	Earphone Cable	NO	NO	1.2m
C-3	RF Cable	YES	NO	0.1m

#### Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in <code>[Length\_]</code> column.

Version.1.2 Page 11 of 55

# 2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation& Conducted Test equipment

- taalati	Torra Corradoted	rest equipment					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibrati on period
1	Spectrum Analyzer	Agilent	E4440A	MY41000130	2024.04.26	2025.04.25	1 year
2	Spectrum Analyzer	Agilent	N9020A	MY49100060	2024.04.25	2025.04.24	1 year
3	Spectrum Analyzer	R&S	FSV40	101417	2024.04.25	2025.04.24	1 year
4	Test Receiver	R&S	ESPI7	101318	2024.04.26	2025.04.25	1 year
5	Bilog Antenna	TESEQ	CBL6111D	31216	2024.05.12	2025.05.11	1 year
6	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2024.04.26	2027.04.25	3 year
7	Horn Antenna	EM	EM-AH-1018 0	2011071402	2024.05.12	2027.05.11	3 year
8	Broadband Horn Antenna	SCHWARZBE CK	BBHA 9170	803	2024.05.12	2027.05.11	3 year
9	Amplifier	EMC	EMC051835 SE	980246	2024.04.25	2025.04.24	1 year
10	Active Loop Antenna	SCHWARZBE CK	FMZB 1519 B	055	2024.05.17	2027.05.16	3 year
11	Power Meter	DARE	RPR3006W	15I00041SN O84	2024.04.25	2025.04.24	1 year
12	Test Cable (9KHz-30MHz)	N/A	R-01	N/A	2023.05.06	2026.05.05	3 year
13	Test Cable (30MHz-1GHz)	N/A	R-02	N/A	2023.05.06	2026.05.05	3 year
14	High Test Cable(1G-40G Hz)	N/A	R-03	N/A	2022.06.17	2025.06.16	3 year
15	Filter	TRILTHIC	2400MHz	29	2024.04.26	2027.04.25	3 year
16	temporary antenna connector (Note)	NTS	R001	N/A	N/A	N/A	N/A

#### Note:

We will use the temporary antenna connector (soldered on the PCB board) When conducted test And this temporary antenna connector is listed within the instrument list

Version.1.2 Page 12 of 55

AC Conduction Test equipment

Ite m	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2024.04.26	2025.04.25	1 year
2	LISN	R&S	ENV216	101313	2024.04.25	2025.04.24	1 year
3	LISN	SCHWARZBE CK	NNLK 8129	8129245	2024.04.25	2025.04.24	1 year
4	50Ω Coaxial Switch	ANRITSU CORP	MP59B	6200983704	2024.04.26	2027.04.25	3 year
5	Test Cable (9KHz-30MH z)	N/A	C01	N/A	2023.05.06	2026.05.05	3 year
6	Test Cable (9KHz-30MH z)	N/A	C02	N/A	2023.05.06	2026.05.05	3 year
7	Test Cable (9KHz-30MH z)	N/A	C03	N/A	2023.05.06	2026.05.05	3 year

Note: Each piece of equipment is scheduled for calibration once a year except the Test Cable& Aux Equipment which is scheduled for calibration every 3 years.

# Measurement Software

Item	Manufacturer	Software Name	Software Version	Description
1	MWRFtest	MTS 8310 2.4GHz/5GHz	2.0	RF Conducted Test
2	Farad	EZ-EMC_RE	AIT-03A	RadiatedTest
3	raditeq	RadiMation	2023.1.3	RadiatedTest
4	Farad	EZ-EMC_CE	AIT-03A	AC Conducted Test

Version.1.2 Page 13 of 55



# 3. TEST REQUIREMENTS

#### 3.1CONDUCTED EMISSION MEASUREMENT

## 3.1.1 APPLICABLE STANDARD

According to FCC Part 15.207(a)

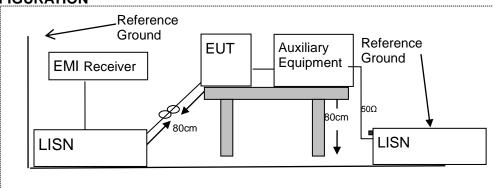
#### 3.1.2 CONFORMANCE LIMIT

Fraguescy/MHz)	Conducted Emission Limit			
Frequency(MHz)	Quasi-peak	Average		
0.15-0.5	66-56*	56-46*		
0.5-5.0	56	46		
5.0-30.0	60	50		

Note: 1. \*Decreases with the logarithm of the frequency

- 2. The lower limit shall apply at the transition frequencies
- 3. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

## 3.1.3 TEST CONFIGURATION



#### 3.1.4 TEST PROCEDURE

According to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 Conducted emissions the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode.

- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room.
- 2. The EUT was placed on a table which is 0.8m above ground plane.
- Connect EUT to the power mains through a line impedance stabilization network (LISN). All other support
  equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for
  the measuring instrument.
- 4. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40cm long.
- 5. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- 6. LISN at least 80 cm from nearest part of EUT chassis.
- 7. The frequency range from 150KHz to 30MHz was searched.
- 8. Set the test-receiver system to Peak Detect Function and specified bandwidth(IF bandwidth=9KHz) with Maximum Hold Mode
- 9. For the actual test configuration, please refer to the related Item -EUT Test Photos.

Version.1.2 Page 14 of 55



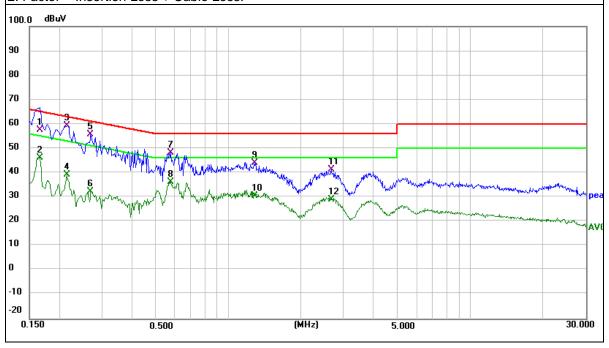
# 3.1.5 TEST RESULTS

EUT:	Tablet PC	Model Name :	Tab 60 Pro	
Taman a ratura .		Relative	57%	
Temperature :	22 (	Humidity:		
Pressure :	1010hPa	Phase :	L	
Test Voltage :	DC 5V from Adapter AC 120V/60Hz	Test Mode :	Mode 1(5.2G)	

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Damadı
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
0.1660	47.54	9.96	57.50	65.16	-7.66	QP
0.1660	36.29	9.96	46.25	55.16	-8.91	AVG
0.2140	49.36	10.05	59.41	63.05	-3.64	QP
0.2140	29.09	10.05	39.14	53.05	-13.91	AVG
0.2700	45.50	10.16	55.66	61.12	-5.46	QP
0.2700	22.07	10.16	32.23	51.12	-18.89	AVG
0.5780	37.53	10.79	48.32	56.00	-7.68	QP
0.5780	25.42	10.79	36.21	46.00	-9.79	AVG
1.2860	31.87	12.24	44.11	56.00	-11.89	QP
1.2860	18.30	12.24	30.54	46.00	-15.46	AVG
2.6540	31.74	9.68	41.42	56.00	-14.58	QP
2.6540	19.50	9.68	29.18	46.00	-16.82	AVG

# Remark:

- All readings are Quasi-Peak and Average values.
   Factor = Insertion Loss + Cable Loss.



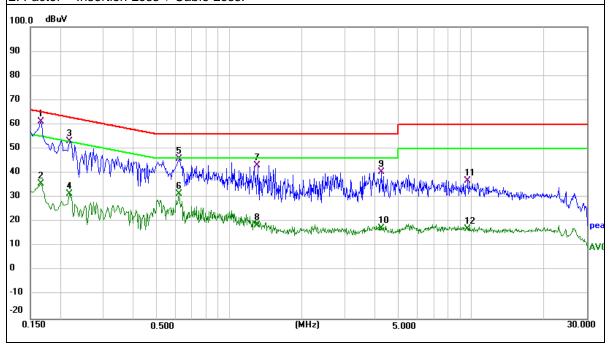
Version.1.2 Page 15 of 55



EUT:	Tablet PC	Model Name :	Tab 60 Pro	
<b>-</b>		Relative	F70/	
Temperature :	22 (	Humidity:	57%	
Pressure :	1010hPa	Phase :	N	
Test Voltage :	DC 5V from Adapter AC 120V/60Hz	Test Mode :	Mode 1(5.2G)	

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
0.1660	51.13	10.00	61.13	65.16	-4.03	QP
0.1660	25.54	10.00	35.54	55.16	-19.62	AVG
0.2180	43.09	10.10	53.19	62.89	-9.70	QP
0.2180	21.32	10.10	31.42	52.89	-21.47	AVG
0.6180	34.95	10.92	45.87	56.00	-10.13	QP
0.6180	20.65	10.92	31.57	46.00	-14.43	AVG
1.3020	30.98	12.28	43.26	56.00	-12.74	QP
1.3020	6.32	12.28	18.60	46.00	-27.40	AVG
4.2340	30.79	9.70	40.49	56.00	-15.51	QP
4.2340	7.55	9.70	17.25	46.00	-28.75	AVG
9.6660	27.08	9.77	36.85	60.00	-23.15	QP
9.6660	7.28	9.77	17.05	50.00	-32.95	AVG

- 1. All readings are Quasi-Peak and Average values.
- 2. Factor = Insertion Loss + Cable Loss.



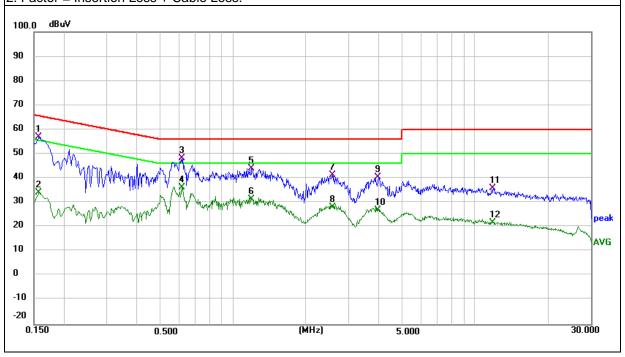
Version.1.2 Page 16 of 55



EUT:	Tablet PC	Model Name :	Tab 60 Pro
Temperature :	22 ℃	Relative Humidity:	57%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 5V from Adapter AC 120V/60Hz	Test Mode :	Mode 1(5.8G)

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
0.1580	47.00	9.94	56.94	65.57	-8.63	QP
0.1580	24.19	9.94	34.13	55.57	-21.44	AVG
0.6140	37.41	10.86	48.27	56.00	-7.73	QP
0.6140	25.26	10.86	36.12	46.00	-9.88	AVG
1.1940	31.95	12.04	43.99	56.00	-12.01	QP
1.1940	19.40	12.04	31.44	46.00	-14.56	AVG
2.5740	31.71	9.68	41.39	56.00	-14.61	QP
2.5740	18.44	9.68	28.12	46.00	-17.88	AVG
3.9740	30.89	9.68	40.57	56.00	-15.43	QP
3.9740	17.13	9.68	26.81	46.00	-19.19	AVG
11.8060	26.26	9.76	36.02	60.00	-23.98	QP
11.8060	12.15	9.76	21.91	50.00	-28.09	AVG

- All readings are Quasi-Peak and Average values.
   Factor = Insertion Loss + Cable Loss.



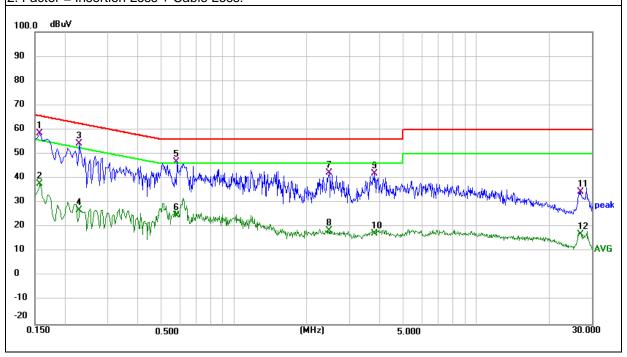
Version.1.2 Page 17 of 55



EUT:	Tablet PC	Model Name :	Tab 60 Pro
Temperature :	22 ℃	Relative Humidity:	57%
Pressure :	1010hPa	Phase :	Z
Test Voltage :	DC 5V from Adapter AC 120V/60Hz	Test Mode :	Mode 1(5.8G)

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
0.1580	48.53	9.99	58.52	65.57	-7.05	QP
0.1580	27.71	9.99	37.70	55.57	-17.87	AVG
0.2300	44.01	10.11	54.12	62.45	-8.33	QP
0.2300	16.94	10.11	27.05	52.45	-25.40	AVG
0.5780	35.78	10.84	46.62	56.00	-9.38	QP
0.5780	14.12	10.84	24.96	46.00	-21.04	AVG
2.4700	32.52	9.68	42.20	56.00	-13.80	QP
2.4700	8.95	9.68	18.63	46.00	-27.37	AVG
3.7820	32.15	9.70	41.85	56.00	-14.15	QP
3.7820	7.70	9.70	17.40	46.00	-28.60	AVG
27.0180	24.50	10.03	34.53	60.00	-25.47	QP
27.0180	6.95	10.03	16.98	50.00	-33.02	AVG

- All readings are Quasi-Peak and Average values.
   Factor = Insertion Loss + Cable Loss.



Version.1.2 Page 18 of 55

# 3.2 RADIATED EMISSION MEASUREMENT

#### 3.2.1 APPLICABLE STANDARD

According to FCC Part 15.407(b) and 15.209

#### 3.2.2 CONFORMANCE LIMIT

According to FCC Part 15.407(b)(7): 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)).

According to FCC Part15.205, Restricted bands

recording to 1 CC 1 art 15.205, restricted baries						
MHz	MHz	GHz				
16.42-16.423	399.9-410	4.5-5.15				
16.69475-16.69525	608-614	5.35-5.46				
16.80425-16.80475	960-1240	7.25-7.75				
25.5-25.67	1300-1427	8.025-8.5				
37.5-38.25	1435-1626.5	9.0-9.2				
73-74.6	1645.5-1646.5	9.3-9.5				
74.8-75.2	1660-1710	10.6-12.7				
123-138	2200-2300	14.47-14.5				
149.9-150.05	2310-2390	15.35-16.2				
156.52475-156.52525	2483.5-2500	17.7-21.4				
156.7-156.9	2690-2900	22.01-23.12				
162.0125-167.17	3260-3267	23.6-24.0				
167.72-173.2	3332-3339	31.2-31.8				
240-285	3345.8-3358	36.43-36.5				
322-335.4	3600-4400	(2)				
		•				
	MHz 16.42-16.423 16.69475-16.69525 16.80425-16.80475 25.5-25.67 37.5-38.25 73-74.6 74.8-75.2 123-138 149.9-150.05 156.52475-156.52525 156.7-156.9 162.0125-167.17 167.72-173.2 240-285	MHz         MHz           16.42-16.423         399.9-410           16.69475-16.69525         608-614           16.80425-16.80475         960-1240           25.5-25.67         1300-1427           37.5-38.25         1435-1626.5           73-74.6         1645.5-1646.5           74.8-75.2         1660-1710           123-138         2200-2300           149.9-150.05         2310-2390           156.52475-156.52525         2483.5-2500           156.7-156.9         2690-2900           162.0125-167.17         3260-3267           167.72-173.2         3332-3339           240-285         3345.8-3358				

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Restricted Frequency(MHz)	Field Strength (µV/m)	Field Strength (dBµV/m)	Measurement Distance
0.009~0.490	2400/F(KHz)	20 log (uV/m)	300
0.490~1.705	24000/F(KHz)	20 log (uV/m)	30
1.705~30.0	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Limits of Radiated Emission Measurement(Above 1000MHz)

Frequency(MHz)	Class B (dBuV/m) (at 3M)		
Frequency(wiriz)	PEAK	AVERAGE	
Above 1000	74	54	

Remark :1. Emission level in dBuV/m=20 log (uV/m)

- 2. Measurement was performed at an antenna to the closed point of EUT distance of meters.
- 3. For Frequency 9kHz~30MHz:

Distance extrapolation factor =40log(Specific distance/ test distance)(dB);

Limit line=Specific limits(dBuV) + distance extrapolation factor.

For Frequency above 30MHz:

Distance extrapolation factor =20log(Specific distance/ test distance)(dB);

Limit line=Specific limits(dBuV) + distance extrapolation factor.

#### **3.2.3 MEASURING INSTRUMENTS**

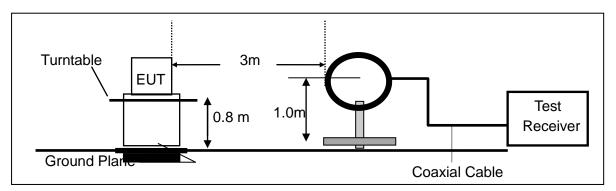
The Measuring equipment is listed in the section 6.3 of this test report.

Version.1.2 Page 19 of 55

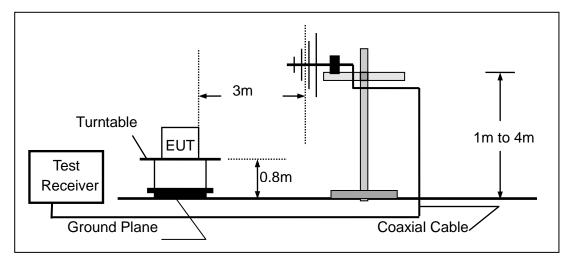


# 3.2.4 TEST CONFIGURATION

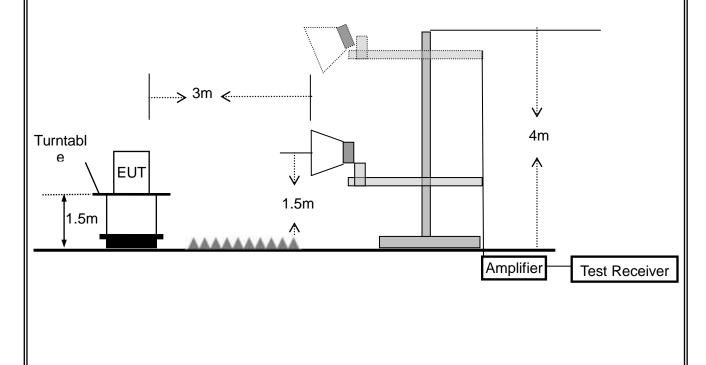
(a) For radiated emissions below 30MHz



(b) For radiated emissions from 30MHz to 1000MHz



(c) For radiated emissions above 1000MHz



Version.1.2 Page 20 of 55

#### 3.2.5 TEST PROCEDURE

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10-2013. The test distance is 3m.The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.

This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205. It must be performed with the highest gain of each type of antenna proposed for use with the EUT. Use the following spectrum analyzer settings:

e e e mie reme ming ep e e main amany = e i e e ming e	<del>.</del>	
Spectrum Parameter	Setting	
Attenuation	Auto	
Start Frequency	1000 MHz	
Stop Frequency	10th carrier harmonic	
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 1MHz for Average	

Receiver Parameter	Setting	
Attenuation	Auto	
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP	
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP	
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP	

- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item -EUT Test Photos.

#### Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Above 4000	Peak	1 MHz	1 MHz
Above 1000	Average	1 MHz	1 MHz

Note: for the frequency ranges below 30 MHz, a narrower RBW is used for these ranges but the measured value should add a RBW correction factor (RBWCF) where RBWCF [dB] =10\*lg(100 [kHz]/narrower RBW [kHz])., the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

Version.1.2 Page 21 of 55

# 3.2.6 TEST RESULTS (9KHz - 30 MHz)

EUT:	Tablet PC	Model Name. :	Tab 60 Pro
Temperature:	<b>20</b> ℃	Relative Humidtity:	48%
Pressure:	1010 hPa	Test Voltage:	DC 3.85V
Test Mode:	TX	Polarization :	

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
				N/A
				N/A

# NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Version.1.2 Page 22 of 55



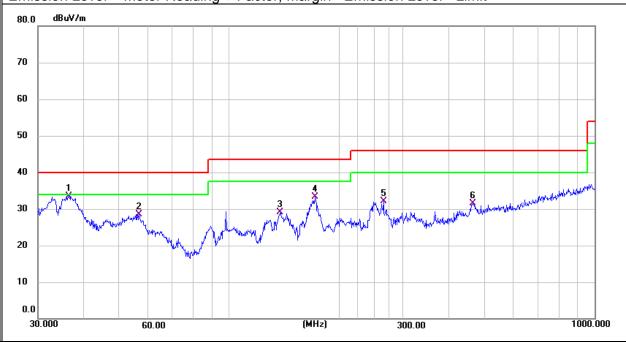
# 3.2.7 TEST RESULTS (30MHz - 1GHz)

EUT :	Tablet PC	Model Name. :	Tab 60 Pro
Temperature :	25℃	Relative Humidity:	55%
Pressure :	1010 hPa	Test Voltage :	DC 3.85V
Test Mode :	TX(5.2G)- 802.11a (Mid CH)		

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark	
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)		
V	36.5090	15.98	17.52	33.50	40.00	-6.50	QP	
V	56.7920	9.45	19.03	28.48	40.00	-11.52	QP	
V	138.3870	14.97	14.19	29.16	43.50	-14.34	QP	
V	171.9950	17.90	15.43	33.33	43.50	-10.17	QP	
V	264.7460	13.13	19.05	32.18	46.00	-13.82	QP	
V	463.9700	7.85	23.59	31.44	46.00	-14.56	QP	

# Remark:

Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



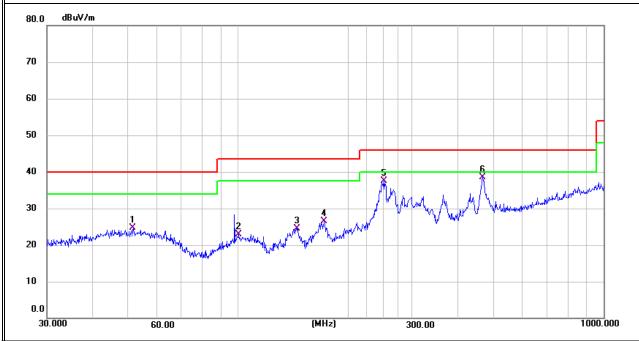
Version.1.2 Page 23 of 55





Polar	Frequency	Meter Reading	Factor	Emission Level Limits		Margin	Remark	
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	, toant	
Н	51.6610	5.34	19.35	24.69	40.00	-15.31	QP	
Н	100.5810	5.29	17.64	22.93	43.50	-20.57	QP	
Н	144.8420	10.46	14.10	24.56	43.50	-18.94	QP	
Н	171.9950	11.15	15.43	26.58	43.50	-16.92	QP	
Н	250.3010	18.95	18.55	37.50	46.00	-8.50	QP	
Н	467.2350	14.82	23.62	38.44	46.00	-7.56	QP	

Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Note(1)"802.11a" mode is the worst mode.

(2)Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

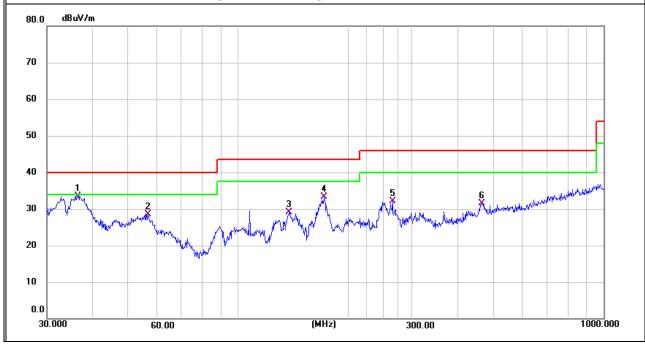
Version.1.2 Page 24 of 55

EUT :	Tablet PC	Model Name. :	Tab 60 Pro
Temperature :	<b>25</b> ℃	Relative Humidity:	55%
Pressure :	1010 hPa	Test Voltage :	DC 3.85V
Test Mode :	TX(5.8G)- 802.11a (Mid CH)		

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark	
(177)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)		
V	36.5090	15.98	17.52	33.50	40.00	-6.50	QP	
V	56.7920	9.45	19.03	28.48	40.00	-11.52	QP	
V	138.3870	14.97	14.19	29.16	43.50	-14.34	QP	
V	171.9950	17.90	15.43	33.33	43.50	-10.17	QP	
V	264.7460	13.13	19.05	32.18	46.00	-13.82	QP	
V	463.9700	7.85	23.59	31.44	46.00	-14.56	QP	

# Remark:

Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Version.1.2 Page 25 of 55



Polar	Frequency	Meter Reading	ading Factor Level		Limits	Margin	Remark
(H/V)	(MHz)	(dBuV)			(dBuV/m)	(dB)	
Н	51.6610	5.34	19.35	24.69	40.00	-15.31	QP
Н	100.5810	5.29	17.64	22.93	43.50	-20.57	QP
Н	144.8420	10.46	14.10	24.56	43.50	-18.94	QP
Н	171.9950	11.15	15.43	26.58	43.50	-16.92	QP
Н	250.3010	18.95	18.55	37.50	46.00	-8.50	QP
Н	467.2350	14.82	23.62	38.44	46.00	-7.56	QP

Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Note(1)"802.11a" mode is the worst mode.

(2)Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

Version.1.2 Page 26 of 55

# 3.2.8 TEST RESULTS (1GHz-18GHz)

EUT:	Tablet PC	Model Name. :	Tab 60 Pro		
Temperature :	20 ℃	Relative Humidity:	48%		
Pressure :	1010 hPa	Test Voltage :	DC 3.85V		
Test Mode :	TX(5.2G) - 802.11a_5180~5240MHz				

	_	Meter	Cable	Antenna	Preamp	Emission			Detector			
Polar	Frequency	Reading	loss	Factor	Factor	Level	Limits	Margin	Туре			
(H/V)	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)				
			Low C	hannel (5180	MHz)-Abov	e 1G		•				
Vertical	3015	61.95	5.94	35.40	44.00	59.29	68.2	-8.91	Pk			
Vertical	10360	58.63	8.46	39.75	44.50	62.34	68.2	-5.86	Pk			
Vertical	15540	61.60	10.12	38.80	44.10	66.42	74	-7.58	Pk			
Vertical	15540	41.61	10.12	38.80	42.70	47.83	54	-6.17	AV			
Horizontal	2981	63.02	5.94	35.18	44.00	60.14	68.2	-8.06	Pk			
Horizontal	10360	60.27	8.46	38.71	44.50	62.94	68.2	-5.26	Pk			
Horizontal	15540	60.16	10.12	38.38	44.10	64.56	74	-9.44	Pk			
Horizontal	15540	38.66	10.12	38.38	44.10	43.06	54	-10.94	AV			
middle Channel (5200 MHz)-Above 1G												
Vertical	3561	63.51	6.48	36.35	44.05	62.29	68.2	-5.91	Pk			
Vertical	10400	60.72	8.47	37.88	44.51	62.56	68.2	-5.64	Pk			
Vertical	15600	59.52	10.12	38.8	44.1	64.34	74	-9.66	Pk			
Vertical	15600	42.37	10.12	38.8	42.7	48.59	54	-5.41	AV			
Horizontal	3363	62.81	6.48	36.37	44.05	61.61	68.2	-6.59	Pk			
Horizontal	10400	59.62	8.47	38.64	44.5	62.23	68.2	-5.97	Pk			
Horizontal	15600	59.00	10.12	38.38	44.1	63.40	74	-10.60	Pk			
Horizontal	15600	43.56	10.12	38.38	44.1	47.96	54	-6.04	AV			
			High C	hannel (5240	MHz)-Abov	e 1G						
Vertical	3926	63.18	7.1	37.24	43.5	64.02	74	-9.98	Pk			
Vertical	3926	44.65	7.1	37.24	43.5	45.49	54	-8.51	AV			
Vertical	10480	61.67	8.46	37.68	44.5	63.31	68.2	-4.89	Pk			
Vertical	15720	56.94	10.12	38.8	44.1	61.76	74	-12.24	Pk			
Vertical	15720	34.79	10.12	38.8	42.7	41.01	54	-12.99	AV			
Horizontal	3885	64.64	7.1	37.24	43.5	65.48	74	-8.52	Pk			
Horizontal	3885	40.92	7.1	37.24	43.5	41.76	54	-12.24	AV			
Horizontal	10480	58.75	8.46	38.57	44.5	61.28	68.2	-6.92	Pk			
Horizontal	15720	59.55	10.12	38.38	44.1	63.95	74	-10.05	Pk			
Horizontal	15720	39.72	10.12	38.38	44.1	44.12	54	-9.88	AV			

Note:"802.11a" mode is the worst mode.

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported. Emission level (dBuV/m) = 20 log Emission level (uV/m). Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Version.1.2 Page 27 of 55

EUT:	Tablet PC	Model Name. :	Tab 60 Pro
Temperature :	20 ℃	Relative Humidity:	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.85V
Test Mode :	TX (5.8G) 802.11a_5745~582	5MHz	

		Meter	Cable	Antenna	Preamp	Emission			Detector	
Polar	Frequency	Reading	loss	Factor	Factor	Level	Limits	Margin	Туре	
(H/V)	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)		
			Low Char	nnel (5745 l	MHz)-Abov	e 1G				
Vertical	2806.9	63.63	5.94	35.40	44.00	60.97	74.00	-13.03	Pk	
Vertical	2806.9	45.24	5.94	35.40	44.00	42.58	54.00	-11.42	AV	
Vertical	11490.56	63.09	8.46	39.75	44.50	66.80	74.00	-7.20	Pk	
Vertical	11490.56	43.86	8.46	39.75	44.50	47.57	54.00	-6.43	AV	
Vertical	17235.32	59.54	10.12	38.80	44.10	64.36	68.20	-3.84	Pk	
Horizontal	2911.524	64.18	5.94	35.18	44.00	61.30	68.20	-6.90	Pk	
Horizontal	11490.56	62.66	8.46	38.71	44.50	65.33	74.00	-8.67	Pk	
Horizontal	11490.56	40.74	8.46	38.71	44.50	43.41	54.00	-10.59	AV	
Horizontal	17235.56	58.79	10.12	38.38	44.10	63.19	68.20	-5.01	Pk	
middle Channel (5785 MHz)-Above 1G										
Vertical	3763.083	63.94	6.48	36.35	44.05	62.72	74.00	-11.28	Pk	
Vertical	3763.083	41.98	6.48	36.35	44.05	40.76	54.00	-13.24	AV	
Vertical 11570.56 63.78		8.47	37.88	44.51	65.62	74.00	-8.38	Pk		
Vertical	Vertical 11570.56 44.86 8.47 37.88		37.88	44.51	46.70	54.00	-7.30	AV		
Vertical	17355.56	59.49	10.12	38.8	44.10	64.31	68.20	-3.89	Pk	
Horizontal	3561.585	61.752269	6.48	36.37	44.05	60.55	68.20	-7.65	Pk	
Horizontal	11570.56	60.47	8.47	38.64	44.50	63.08	74.00	-10.92	Pk	
Horizontal	11570.56	43.75	8.47	38.64	44.50	46.36	54.00	-7.64	AV	
Horizontal	17355.56	62.96	10.12	38.38	44.10	67.36	74.00	-6.64	Pk	
Horizontal	17355.35	43.22	10.12	38.38	44.10	47.62007	54.00	-6.38	AV	
			High Cha	nnel (5825	MHz)-Abov	e 1G				
Vertical	3907.168	60.81	7.10	37.24	43.50	61.65	74.00	-12.35	Pk	
Vertical	3907.168	42.48	7.10	37.24	43.50	43.32	54.00	-10.68	AV	
Vertical	11650.54	60.79	8.46	37.68	44.50	62.43	74.00	-11.57	Pk	
Vertical	11650.54	43.53	8.46	37.68	44.50	45.17	54.00	-8.83	AV	
Vertical	17475.54	60.32	10.12	38.8	44.10	65.14	68.20	-3.06	Pk	
Horizontal	3912.779	61.82	7.10	37.24	43.50	62.66	74.00	-11.34	Pk	
Horizontal	3912.779	43.33	7.10	37.24	43.50	44.17	54.00	-9.83	AV	
Horizontal	11650.54	62.92	8.46	38.57	44.50	65.45	74.00	-8.55	Pk	
Horizontal	11650.54	43.22	8.46	38.57	44.50	45.75	54.00	-8.25	AV	
Horizontal	17475.54	59.99	10.12	38.38	44.10	64.39	68.20	-3.81	Pk	

Note:"802.11a" mode is the worst mode.

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Version.1.2 Page 28 of 55



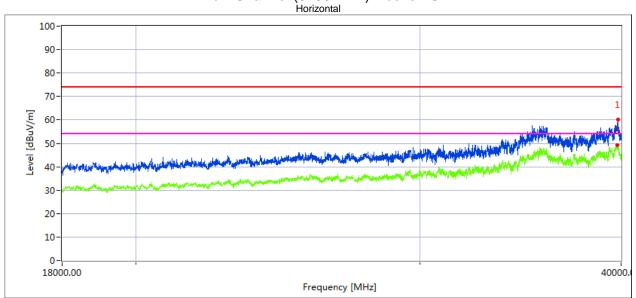
# 3.2.9 TEST RESULTS (18GHz-40GHz)

EUT:	Tablet PC	Model Name. :	Tab 60 Pro
Temperature :	20 ℃	Relative Humidity:	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.85V

Test Mode : TX (5.2G)-802.11a 5180MHz~5240MHz, TX (5.8G)-802.11a 5745MHz~5825MHz

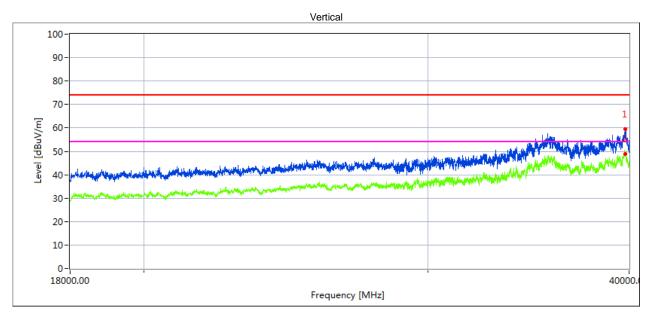
All the modulation modes have been tested, and the worst result was report as below:

# Low Channel (5180 MHz)-Above 1G



#### Measurement Result:

Frequency MHz	Meter Reading dBuV	Cable loss dB	Antenna Factor dB/m	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Detector Type
39797.696	36.62	20.09	44.07	43.48	57.3	68.2	-10.9	Peak

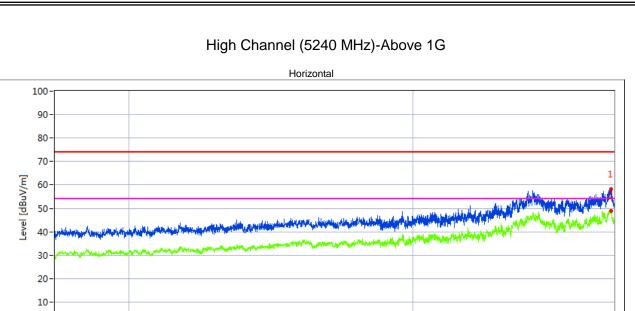


## **Measurement Result:**

Frequency MHz	Meter Reading dBuV	Cable loss dB	Antenna Factor dB/m	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Detector Type
39765.946	36.13	20.09	44.1	43.22	57.1	68.2	-11.1	Peak

Version.1.2 Page 29 of 55

40000.

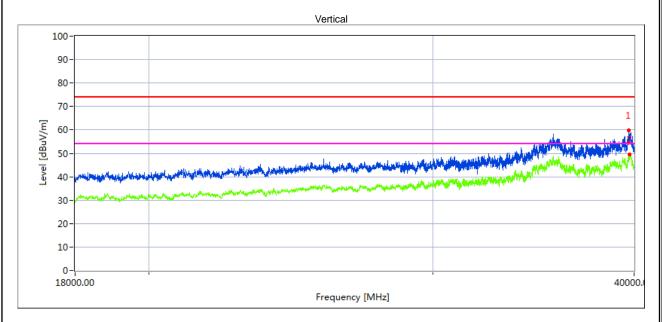


# **Measurement Result:**

0-

Frequency MHz	Meter Reading dBuV	Cable loss dB	Antenna Factor dB/m	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Detector Type
39831.928	34.22	20.09	44.07	43.48	54.9	68.2	-13.3	Peak

Frequency [MHz]



## **Measurement Result:**

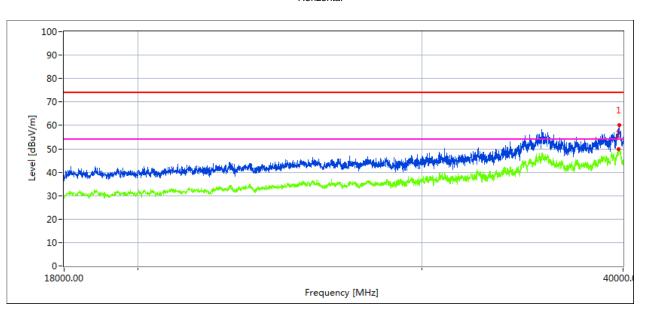
Frequency MHz	Meter Reading dBuV	Cable loss dB	Antenna Factor dB/m	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Detector Type
39732.125	36.82	20.09	44.07	43.48	57.5	68.2	-10.7	Peak

Version.1.2 Page 30 of 55



# Low Channel (5745 MHz)-Above 1G

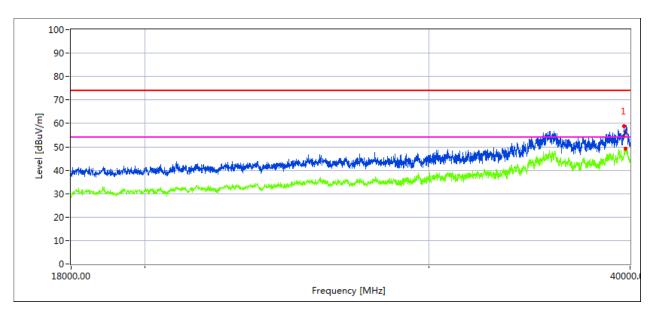
#### Horizontal



## **Measurement Result:**

Frequency MHz	Meter Reading dBuV	Cable loss dB	Antenna Factor dB/m	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Detector Type
39737.048	35.83	20.09	44.1	43.22	56.8	68.2	-11.4	Peak

#### Vertical



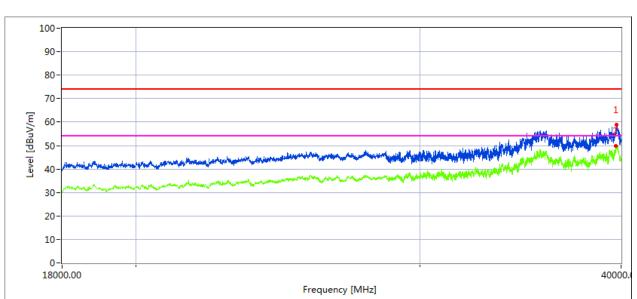
#### **Measurement Result:**

Frequer MHz	cy Meter Reading dBuV	Cable loss dB	Antenna Factor dB/m	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Detector Type
39743	06 35.41	20.09	44.16	44.06	55.6	68.2	-12.6	Peak

Version.1.2 Page 31 of 55

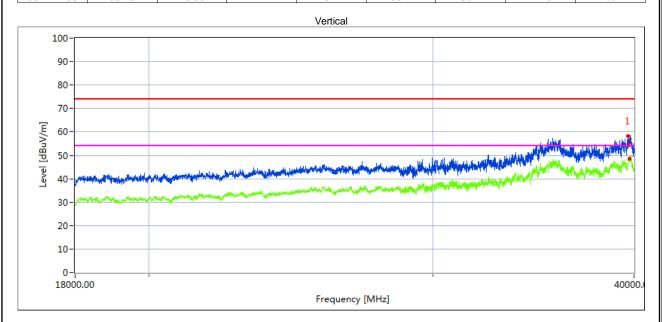






## **Measurement Result:**

Frequency MHz	Meter Reading dBuV	Cable loss dB	Antenna Factor dB/m	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Detector Type
39714.468	35.73	20.09	44.1	43.22	56.7	68.2	-11.5	Peak



# **Measurement Result:**

Frequency MHz	Meter Reading dBuV	Cable loss dB	Antenna Factor dB/m	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Detector Type
39728.584	35.63	20.09	44.1	43.22	56.6	68.2	-11.6	Peak

Version.1.2 Page 32 of 55



# 3.2.10 Spurious Emission in Restricted Band 4.5GHz~5.150 GHz& 5.350GHz~5460GHz

EUT:	Tablet PC	Model Name. :	Tab 60 Pro				
Temperature :	20 ℃	Relative Humidity:	48%				
Pressure :	1010 hPa	Test Voltage :	DC 3.85V				
Test Mode :	TX (5.2G)-802.11a 5150MHz~5250MHz,						

# All the modulation modes have been tested, the report just record the worst data mode.

		10000 110	0 00011 10	0.00,0	cport just i	0001011101	rorot data		
Frequen	Meter	Cable	Antenna	Preamp	Emission	Limits	Margin	Detec	
су	Reading	Loss	Factor	Factor	Level	Lillito	Margin	tor	Comment
(MHz)	(dBµV)	(dB)	dB/m	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре	
				5.2G WIFI-	802.11a Mode	9			
4500	62.18	5.2	35.6	44.2	58.78	74	-15.22	Pk	Horizontal
4500	45.17	5.2	35.6	44.2	41.77	54	-12.23	AV	Horizontal
4500	53.68	5.2	35.6	44.2	50.28	74	-23.72	Pk	Horizontal
4500	39.79	5.2	35.6	44.2	36.39	54	-17.61	AV	Horizontal
5150	68.91	5.36	35.66	44.22	65.71	74	-8.29	Pk	Horizontal
5150	50.49	5.36	35.66	44.22	47.29	54	-6.71	AV	Horizontal
5150	68.95	5.36	35.66	44.22	65.75	74	-8.25	Pk	Vertical
5150	49.91	5.36	35.66	44.22	46.71	54	-7.29	AV	Vertical
5350	60.91	5.68	35.68	44.22	58.05	74	-15.95	Pk	Vertical
5350	40.53	5.68	35.68	44.22	37.67	54	-16.33	AV	Vertical
5350	53.98	5.68	35.68	44.22	51.12	74	-22.88	Pk	Horizontal
5350	37.66	5.68	35.68	44.22	34.80	54	-19.20	AV	Horizontal

Note: (1) Emission Level= Antenna Factor + Cable Loss + Read Level - Preamp Factor

Version.1.2 Page 33 of 55

<sup>(2) &</sup>quot;802.11a" mode is the worst mode. When PK value is lower than the Average value limit, average don't record.

#### B.3 POWER SPECTRAL DENSITY TEST

## 3.3.1 Applied procedures / limit

## According to FCC §15.407(a)(3)

For the band 5.15-5.25 GHz,

- (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
- (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
- (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
- (iv) For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz

(3)For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Version.1.2 Page 34 of 55



#### 3.3.2 TEST PROCEDURE

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, "provided that the measured power is integrated over the full reference bandwidth" to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

- a) Set RBW  $\geq$  1/T, where T is defined in section II.B.l.a).
- b) Set VBW ≥ 3 RBW.
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
- d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10log(1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
- e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections 5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

#### 3.3.3 DEVIATION FROM STANDARD

No deviation.

## 3.3.4 TEST SETUP



## 3.3.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

Version.1.2 Page 35 of 55



# 3.3.6 **TEST RESULTS**

EUT:	Tablet PC	Model Name. :	Tab 60 Pro
Temperature :	25 ℃	Relative Humidity:	56%
Pressure :	1015 hPa	Test Voltage :	DC 3.85V
Test Mode :	TX Frequency Band I (5150-52	50MHz), Band IV (5	725-5850MHz)

Test data reference attachment.

Version.1.2 Page 36 of 55



#### B.4 26DB & 99% EMISSION BANDWIDTH

### 3.4.1 Applied procedures / limit

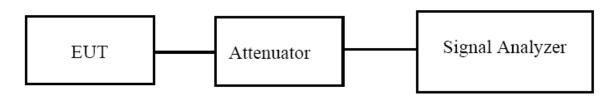
The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

## 3.4.2 TEST PROCEDURE

- a) Set RBW = approximately 1% of the emission bandwidth.
- b) Set the VBW > RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

The following procedure shall be used for measuring (99 %) power bandwidth:

- 1. Set center frequency to the nominal EUT channel center frequency.
- 2. Set span = 1.5 times to 5.0 times the OBW.
- 3. Set RBW = 1 % to 5 % of the OBW
- 4. Set VBW ≥ 3 · RBW
- 5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
  - 6. Use the 99 % power bandwidth function of the instrument (if available).
- 7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.



Version.1.2 Page 37 of 55

### 3.4.3 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

## **3.4.4 TEST RESULTS**

EUT:	Tablet PC	Model Name. :	Tab 60 Pro			
Temperature :	25 ℃	Relative Humidity:	56%			
Pressure :	1012 hPa	Test Voltage :	DC 3.85V			
Test Mode :	TX Frequency Band I (5150-5250MHz), Band IV (5725-5850MHz)					

Test data reference attachment.

Version.1.2 Page 38 of 55



#### B.5 MINIMUM 6 DB BANDWIDTH

### 3.5.1 Applied procedures / limit

## According to FCC §15.407(e)

(e) Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

#### 3.5.2 TEST PROCEDURE

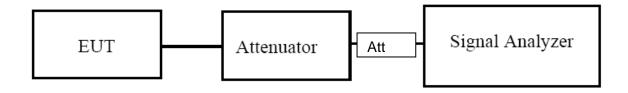
Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.715-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW)  $\geq$  3 × RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

### 3.5.3 DEVIATION FROM STANDARD

No deviation.

### 3.5.4 TEST SETUP



### 3.5.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

Version.1.2 Page 39 of 55



# 3.5.6 TEST RESULTS

EUT:	Tablet PC	Model Name. :	Tab 60 Pro			
Temperature :	25 ℃	Relative Humidity:	60%			
Pressure :	1012 hPa	1012 hPa Test Voltage : DC 3.85V				
Test Mode :	TX (5G) Mode Frequency Band IV (5725-5850MHz)					

Test data reference attachment.

Version.1.2 Page 40 of 55



#### B.6 MAXIMUM CONDUCTED OUTPUT POWER

#### 3.6.1 PPLIED PROCEDURES / LIMIT

### According to FCC §15.407

The maximum conduced output power should not exceed:

Frequency Band(MHz)	Limit
5150~5250	250mW
5725~5850	1W

#### 3.6.2 TEST PROCEDURE

- Maximum conducted output power may be measured using a spectrum analyzer/EMI receiver or an RF power meter.
  - 1. Device Configuration

with § 15.407(a).

If possible, configure or modify the operation of the EUT so that it transmits continuously at its maximum power control level (see section II.B.).

- a) The intent is to test at 100 percent duty cycle; however a small reduction in duty cycle (to no lower than 98 percent) is permitted if required by the EUT for amplitude control purposes. Manufacturers are expected to provide software to the test lab to permit such continuous operation.
- b) If continuous transmission (or at least 98 percent duty cycle) cannot be achieved due to hardware limitations (e.g., overheating), the EUT shall be operated at its maximum power control level with the transmit duration as long as possible and the duty cycle as high as possible.
- 2. Measurement using a Spectrum Analyzer or EMI Receiver (SA)

  Measurement of maximum conducted output power using a spectrum analyzer requires integrating the spectrum across a frequency span that encompasses, at a minimum, either the EBW or the 99-percent occupied bandwidth of the signal.1 However, the EBW must be used to determine bandwidth dependent limits on maximum conducted output power in accordance

Version.1.2 Page 41 of 55



- a) The test method shall be selected as follows: (i) Method SA-1 or SA-1 Alternative (averaging with the EUT transmitting at full power throughout each sweep) shall be applied if either of the following conditions can be satisfied:
  - The EUT transmits continuously (or with a duty cycle ≥ 98 percent).
- Sweep triggering or gating can be implemented in a way that the device transmits at the maximum power control level throughout the duration of each of the instrument sweeps to be averaged. This condition can generally be achieved by triggering the instrument's sweep if the duration of the sweep (with the analyzer configured as in Method SA-1, below) is equal to or shorter than the duration T of each transmission from the EUT and if those transmissions exhibit full power throughout their durations.
- (ii) Method SA-2 or SA-2 Alternative (averaging across on and off times of the EUT transmissions, followed by duty cycle correction) shall be applied if the conditions of (i) cannot be achieved and the transmissions exhibit a constant duty cycle during the measurement duration. Duty cycle will be considered to be constant if variations are less than ± 2 percent.
- (iii) Method SA-3 (RMS detection with max hold) or SA-3 Alternative (reduced VBW with max hold) shall be applied if the conditions of (i) and (ii) cannot be achieved.
- b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep): (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.
  - (ii) Set RBW = 1 MHz.
  - (iii) Set VBW ≥ 3 MHz.
- (iv) Number of points in sweep  $\geq$  2 Span / RBW. (This ensures that bin-to-bin spacing is  $\leq$  RBW/2, so that narrowband signals are not lost between frequency bins.)
  - (v) Sweep time = auto.
- (vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- (vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run".
  - (viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- (ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum

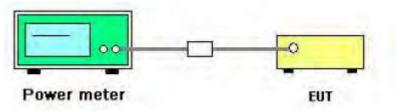
Version.1.2 Page 42 of 55



## 3.6.3 DEVIATION FROM STANDARD

No deviation.

## 3.6.4 TEST SETUP



## 3.6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

Version.1.2 Page 43 of 55



# 3.6.6 TEST RESULTS

EUT:	Tablet PC	Model Name. :	Tab 60 Pro			
Temperature :	<b>25</b> ℃	Relative Humidity:	60%			
Pressure :	1012 hPa	Test Voltage :	DC 3.85V			
Test Mode :	TX (5G) Mode Frequency Band I (5150-5250MHz), Band IV (5725-5850MHz)					

Test data reference attachment.

Version.1.2 Page 44 of 55

#### B.7 OUT OF BAND EMISSIONS

### 3.7.1 Applicable Standard

#### According to FCC §15.407(b)

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
- (2) For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

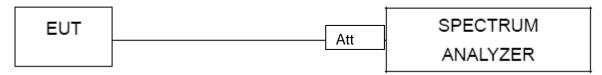
#### 3.7.2 Test Procedure

- 1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- 2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
- 3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.
- 4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
- 5. Repeat above procedures until all measured frequencies were complete.

### 3.7.3 DEVIATION FROM STANDARD

No deviation.

#### 3.7.4 TEST SETUP



## 3.7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

Version.1.2 Page 45 of 55



## 3.7.6 TEST RESULTS

EUT:	Tablet PC	Model Name. :	Tab 60 Pro
Temperature :	<b>25</b> ℃	Relative Humidity:	56%
Pressure :	1012 hPa	Test Voltage :	DC 3.85V

Test data reference attachment.

Version.1.2 Page 46 of 55

#### B.8 SPURIOUS RF CONDUCTED EMISSIONS

#### 3.8.1Conformance Limit

According to FCC §15.407(b)(1) (2) (3) (4)

## 3.8.2Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

## 3.8.3Test Setup

Please refer to Section 6.1 of this test report.

#### 3.8.4Test Procedure

The Spurious RF conducted emissions compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10-2013 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW=100kHz and VBW= 300KHz to measure the peak field strength, and measure frequency range from 30MHz to 40GHz.

#### 3.8.5Test Results

Remark: The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and bandege measurement data.

measurement	. '	Tilgriest chamiels are t	ested to verify the s	spunous emissions ai	ia bariaege
Test data refere	ence attachment.				

Version.1.2 Page 47 of 55



#### 3.9 FREQUENCY STABILITY MEASUREMENT

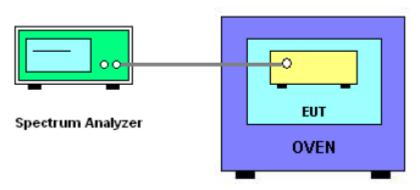
#### 3.9.1 LIMIT

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

#### B.9.2 TEST PROCEDURES

- 1. The transmitter output (antenna port) was connected to the spectrum analyzer.
- 2. EUT have transmitted absence of modulation signal and fixed channelize.
- 3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
- 4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings.
- 5. fc is declaring of channel frequency. Then the frequency error formula is  $(fc-f)/fc \times 10_6 \, ppm$ .
- 6. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
- 7. Extreme temperature is -20°C~70°C.

### B.9.3 TEST SETUP LAYOUT



#### B.9.4 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously un-modulation transmitting mode.

Version.1.2 Page 48 of 55



# 3.9.5 TEST RESULTS

EUT:	Tablet PC	Model Name. :	Tab 60 Pro			
Temperature :	25 ℃	Relative Humidity:	56%			
Pressure :	1012 hPa	Test Voltage :	DC 3.85V			
Test Mode :	TX Frequency Band I (5150-5250MHz)					

# Voltage vs. Frequency Stability

				Reference Frequency: 5180MHz			
	TEC	T CONDITIONS				Max.	Max.
	IES	CONDITIONS	)	f	fc	Deviation	Deviation
					(MHz)	(ppm)	
Thom		V nom (V)	3.85	5180.0258	5180	0.0258	4.9807
T nom	20	V max (V)	4.43	5180.0526	5180	0.0526	10.1544
(°C)		V min (V)	3.27	5180.0169	5180	0.0169	3.2625
Limits			Within 5150-5250MHz				
Result			Complies				

# Temperature vs. Frequency Stability

				Reference Frequency: 5180MHz			
_	EST CC	NDITIONS	<b>,</b>			Max.	Max.
'	E31 CC	MULLIONS	)	f	fc	Deviation	Deviation
						(MHz)	(ppm)
		T (°C)	-20	5180.0136	5180	0.0136	2.6255
		T (°C)	-10	5180.0137	5180	0.0136	2.6351
	3.85	T (°C)	0	5180.0273	5180	0.0273	5.2625
		T (°C)	10	5180.0159	5180	0.0159	3.0695
\/ nom (\/)		T (°C)	20	5180.0138	5180	0.0138	2.6641
V nom (V)		T (°C)	30	5180.0156	5180	0.0156	3.0116
		T (°C)	40	5180.0136	5180	0.0136	2.6255
		T (°C)	50	5180.0164	5180	0.0164	3.1660
		T (°C)	60	5180.0183	5180	0.0183	3.5328
		T (°C)	70	5180.0138	5180	0.0138	2.6641
Limits			Within 5150-5250MHz				
_	Re	esult	_		Con	nplies	_

Version.1.2 Page 49 of 55

## Voltage vs. Frequency Stability

				Reference Frequency: 5200MHz			
	TEC	T CONDITIONS				Max.	Max.
	IES	CONDITIONS	)	f	fc	Deviation	Deviation
						(MHz)	(ppm)
T 10 0 100		V nom (V)	3.85	5200.0116	5200	0.0116	2.2308
T nom	20	V max (V)	4.43	5200.0125	5200	0.0125	2.4038
(°C)		V min (V)	3.27	5200.0132	5200	0.0132	2.5385
	Limits			Within 5150-5250MHz			
Result					Complies		

# Temperature vs. Frequency Stability

				Reference Frequency: 5200MHz			
_	EST CC	NDITIONS	<b>.</b>			Max.	Max.
'	E31 CC	MUITIONS	)	f	fc	Deviation	Deviation
						(MHz)	(ppm)
		T (°C)	-20	5200.0326	5200	0.0326	6.2692
		T (°C)	-10	5200.0159	5200	0.0159	3.0577
	3.85	T (°C)	0	5200.0305	5200	0.0305	5.8731
		T (°C)	10	5200.0256	5200	0.0256	4.9231
V nom (V)		T (°C)	20	5200.0133	5200	0.0133	2.5519
v Holli (v)		T (°C)	30	5200.0125	5200	0.0125	2.4038
		T (°C)	40	5200.0176	5200	0.0176	3.3846
		T (°C)	50	5200.0173	5200	0.0173	3.3269
		T (°C)	60	5200.0128	5200	0.0128	2.4588
		T (°C)	70	5200.0126	5200	0.0126	2.4231
Limits			Within 5150-5250MHz				
	Result				Com	nplies	

Version.1.2 Page 50 of 55

# Voltage vs. Frequency Stability

				Reference Frequency: 5240MHz			
	TEC	T CONDITIONS	`			Max.	Max.
	IES	CONDITIONS	•	f	fc	Deviation	Deviation
						(MHz)	(ppm)
Tnom		V nom (V)	3.85	5240.0116	5240	0.0116	2.2137
T nom	20	V max (V)	4.43	5240.0152	5240	0.0152	2.9008
(°C)		V min (V)	3.27	5240.0153	5240	0.0153	2.9198
	Limits			Within 5150-5250MHz			
Result			Complies				

# Temperature vs. Frequency Stability

				Reference Frequency: 5240MHz			
_	EST CC	NDITIONS	<b>,</b>			Max.	Max.
'	E31 CC	MULLIONS	)	f	fc	Deviation	Deviation
						(MHz)	(ppm)
		T (°C)	-20	5240.0116	5240	0.0116	2.2137
		T (°C)	-10	5240.0154	5240	0.0154	2.9389
	3.85	T (°C)	0	5240.0156	5240	0.0156	2.9771
		T (°C)	10	5240.0226	5240	0.0226	4.3130
\/ nom (\/)		T (°C)	20	5240.0123	5240	0.0123	2.3473
V nom (V)		T (°C)	30	5240.0147	5240	0.0147	2.8053
		T (°C)	40	5240.0175	5240	0.0175	3.3397
		T (°C)	50	5240.0163	5240	0.0163	3.1107
		T (°C)	60	5240.0146	5240	0.0146	2.7863
		T (°C)	70	5240.0116	5240	0.0116	2.2137
Limits			Within 5150-5250MHz				
	Re	esult			Con	nplies	

Version.1.2 Page 51 of 55



EUT:	Tablet PC	Model Name. :	Tab 60 Pro			
Temperature :	<b>25</b> ℃	Relative Humidity:	56%			
Pressure :	1012 hPa	Test Voltage :	DC 3.85V			
Test Mode :	TX Frequency(5745-5825MHz)					

# Voltage vs. Frequency Stability

				Reference Frequency: 5745MHz						
	TEC	T CONDITIONS	<b>、</b>			Max.	Max.			
	IES	CONDITIONS	•	f	fc	Deviation	Deviation			
						(MHz)	(ppm)			
Tnom		V nom (V)	3.85	5745.0397	5745	0.0397	6.9104			
T nom	20	V max (V)	4.43	5745.0747	5745	0.0747	13.0026			
(°C)					V min (V)	3.27	5745.0964	5745	0.0964	16.7798
Limits				Within 5745-5850MHz						
		Result		Complies						

# Temperature vs. Frequency Stability

				Reference Frequency: 5745MHz			
_	EST CC	NDITIONS				Max.	Max.
'	E31 CC	MUITIONS	)	f	fc	Deviation	Deviation
						(MHz)	(ppm)
		T (°C)	-20	5745.0185	5745	0.0185	3.2202
		T (°C)	-10	5745.0147	5745	0.0147	2.5587
	3.85	T (°C)	0	5745.0836	5745	0.0836	14.5518
		T (°C)	10	5745.0142	5745	0.0142	2.4717
\/ nom (\/)		T (°C)	20	5745.0125	5745	0.0125	2.1758
V nom (V)		T (°C)	30	5745.0113	5745	0.0113	1.9669
		T (°C)	40	5745.0162	5745	0.0162	2.8198
		T (°C)	50	5745.0167	5745	0.0167	2.9069
		T (°C)	60	5745.0145	5745	0.0145	2.5239
		T (°C)	70	5745.0124	5745	0.0124	2.1584
Limits			Within 5745-5850MHz				
	Re	esult			Com	plies	

Version.1.2 Page 52 of 55

# Voltage vs. Frequency Stability

				Reference Frequency: 5785MHz							
	TEC	T CONDITIONS				Max.	Max.				
	IES	CONDITIONS	)	f	fc	Deviation	Deviation				
						(MHz)	(ppm)				
T 10 0 100		V nom (V)	3.85	5785.0146	5785	0.01460	-2.5238				
T nom	20	V max (V)	4.43	5785.0124	5785	0.01240	-2.1435				
(°C)						V min (V)	3.27	5785.0146	5785	0.01460	-2.5238
Limits				Within 5745-5850MHz							
Result				Complies							

# Temperature vs. Frequency Stability

				Reference Frequency: 5785MHz			
_	EST CC	NDITIONS				Max.	Max.
'	E31 CC	אוטוווטווכ	)	f	fc	Deviation	Deviation
						(MHz)	(ppm)
		T (°C)	-20	5785.0235	5785	0.0235	4.0622
		T (°C)	-10	5785.0137	5785	0.0137	2.3682
	3.85	T (°C)	0	5785.0468	5785	0.0468	8.0899
		T (°C)	10	5785.0743	5785	0.0743	12.8436
\/ nom (\/)		T (°C)	20	5785.0742	5785	0.0742	12.8263
V nom (V)		T (°C)	30	5785.0731	5785	0.0731	12.6361
		T (°C)	40	5785.0057	5785	0.0057	0.9853
		T (°C)	50	5785.0146	5785	0.0146	2.5238
		T (°C)	60	5785.0155	5785	0.0155	2.6793
		T (°C)	70	5785.0153	5785	0.0153	2.6448
Limits			Within 5745-5850MHz			_	
	Re	esult			Com	plies	

Version.1.2 Page 53 of 55

# Voltage vs. Frequency Stability

				Reference Frequency: 5825MHz				
	TEC	T CONDITIONS		f		Max.	Max.	
	IES	CONDITIONS	)		fc	Deviation	Deviation	
						(MHz)	(ppm)	
T 10 0 100		V nom (V)	3.85	5825.0165	5825	0.0165	2.8326	
T nom	20	V max (V)	4.43	5825.0147	5825	0.0147	2.5236	
(°C)			V min (V)	3.27	5825.0725	5825	0.0725	12.4464
Limits				Within 5745-5850MHz				
Result				Complies				

Temperature vs. Frequency Stability

ilperature vs.	roquoi	ioy Clability	<u> </u>	Reference Frequency: 5825MHz			
_		NIDITION				Max.	Max.
I	ES1 CC	NDITIONS	)	f	fc	Deviation	Deviation
						(MHz)	(ppm)
		T (°C)	-20	5825.0092	5825	0.0092	1.5794
		T (°C)	-10	5825.0156	5825	0.0156	2.6781
	3.85	T (°C)	0	5825.0126	5825	0.0126	2.1631
		T (°C)	10	5825.0083	5825	0.0083	1.4249
		T (°C)	20	5825.0097	5825	0.0097	1.6652
V nom (V)		T (°C)	30	5825.0126	5825	0.0126	2.1631
		T (°C)	40	5825.0143	5825	0.0143	2.4549
		T (°C)	50	5825.0026	5825	0.0026	0.4464
		T (°C)	60	5825.0166	5825	0.0166	2.8498
		T (°C)	70	5825.0157	5825	0.0157	2.6953
Limits			Within 5745-5850MHz				
Result				Complies			

Version.1.2 Page 54 of 55

## 4. ANTENNA REQUIREMENT

### **4.1 STANDARD REQUIREMENT**

15.203 requirement: For intentional device, according to 15.203: 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.

### **4.2 EUT ANTENNA**

The EUT antenna is permanent attached PIFA antenna (antenna gain: band I: -1.3dBi; band IV: -1.3dBi). It comply with the standard requirement.

**END OF REPORT** 

Version.1.2 Page 55 of 55