FCC Part 15B
Measurement and Test Report

For

Guangzhou Shangke Information Technology Co.,LTD

A1, E1, C2 Room, 17/F No. 689, GuangDa Bank Bldg. North-Tianhe Road,

Tianhe District, GUANGZHOU, China

FCC ID: 2ACGTTBOOK10

Test Rule(s):	FCC Part 15 Subpart B
Product Description:	Tablet PC
Tested Model:	Tbook 10
Report No.:	STR16058059I-1
Tested Date:	2016-05-11 to 2016-05-18
Issued Date:	2016-05-19
Tested By:	Lucy Wei / Engineer
Reviewed By:	Silin Chen / EMC Manager
Approved & Authorized By:	Jandy so / PSQ Manager

Prepared By:

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TABLE OF CONTENTS

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	Guangzhou Shangke Information Technology Co.,LTD
Address of applicant:	A1, E1, C2 Room, 17/F No. 689, GuangDa Bank Bldg. North-Tianhe Road, Tianhe District, GUANGZHOU, China
Manufacturer:	Guangzhou Shangke Information Technology Co.,LTD
Address of manufacturer:	A1, E1, C2 Room, 17/F No. 689, GuangDa Bank Bldg. North-Tianhe Road, Tianhe District, GUANGZHOU, China

General Description of EUT	
Product Name:	Tablet PC
Trade Name:	Teclast
Model No.:	Tbook 10
Adding Model(s):	Tbook11, Tbook16, Tbook16s, Tbook16Pro, Tbook12,Tbook12s,Tbook12Pro, Tbook12Plus, X3Pro, X4Pro, X5Pro,X6Pro, X16Plus, X10Plus, X10Pro, X10, X97, X98, X98Plus, X98PlusII, X98Pro, X80 Power, X89Kindow, X80HD, X80Pro, X80Plus, X89Plus, P80H, A78T, P80T, P10, P98, X70R, P80, P70,Tbook series, Tbook-xx, Tbook-xx-pro, Tbook-xx-s
Note: The test data is gathered from a production sample, provided by the manufacturer. The appearance of others models listed in the report is different from main-test model Tbook 10, but the circuit and the electronic construction do not change, declared by the manufacturer.	

Technical Characteristics of EUT	
Rated Voltage:	DC 3.8V Battery
Battery Capacity:	6000mAh
Rated Power:	/
Power Adapter Model:	TP-U29 Input:100-240V 50/60Hz 0.5A; Output: DC 9V/2000mA
Highest Internal Frequency:	1.84GHz
Classification of ITE:	Class B

1.2 Test Standards

The following report is prepared on behalf of the Guangzhou Shangke Information Technology Co., LTD in accordance with Part 2, Subpart J, and Part 15, Subparts A and B of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC Part 15, Subpart B, and section 15.205, 15.107, and 15.109 rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

1.4 Test Facility

FCC – Registration No.: 934118

Shenzhen SEM.Test Technology Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files and the Registration is 934118.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Shenzhen SEM.Test Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

CNAS Registration No.: L4062

Shenzhen SEM.Test Technology Co., Ltd. is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L4062. All measurement facilities used to collect the measurement data are located at 1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C (518101).

1.5 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted according to the operation manual for use, more detailed description as follows:

Test Mode List:

Test Mode	Description	Remark
TM1	Charging & playing & TF Card & HDMI	/
TM2	Downloading	Connected to PC
TM3	Camera on	Powered by battery
TM4	/	/

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
USB Cable	0.7	Shielded	Without Ferrite
OTG Cable	0.14	Unshielded	Without Ferrite

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
Notebook	Lenovo	E10	LR-63C8R

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
Earphone	1.2	Unshielded	Without Ferrite
HDMI cable	1.0	Shielded	Without Ferrite

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Conducted Emissions	Conducted	±2.88dB
Transmitter Spurious Emissions	Radiated	±5.1dB

1.7 Test Equipment List and Details

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
SEMT-1072	Spectrum Analyzer	Agilent	E4407B	MY41440400	2015-06-17	2016-06-16
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2015-06-17	2016-06-16
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2015-06-17	2016-06-16
SEMT-1008	Amplifier	Agilent	8447F	3113A06717	2015-06-17	2016-06-16
SEMT-1043	Amplifier	C&D	PAP-1G18	2002	2015-06-17	2016-06-16
SEMT-1011	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2015-06-17	2016-06-16
SEMT-1042	Horn Antenna	ETS	3117	00086197	2015-06-17	2016-06-16
SEMT-1121	Horn Antenna	ETS	3116B	00088203	2015-06-17	2016-06-16
SEMT-1069	Loop Antenna	Schwarz beck	FMZB 1516	9773	2015-06-17	2016-06-16
SEMT-1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2015-06-17	2016-06-16
SEMT-1003	L.I.S.N	Schwarz beck	NSLK8126	8126-224	2015-06-17	2016-06-16
SEMT-1002	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2015-06-17	2016-06-16

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§ 15.107 (a)	Conducted Emissions	Compliant
§ 15.109 (a)	Radiated Emissions	Compliant

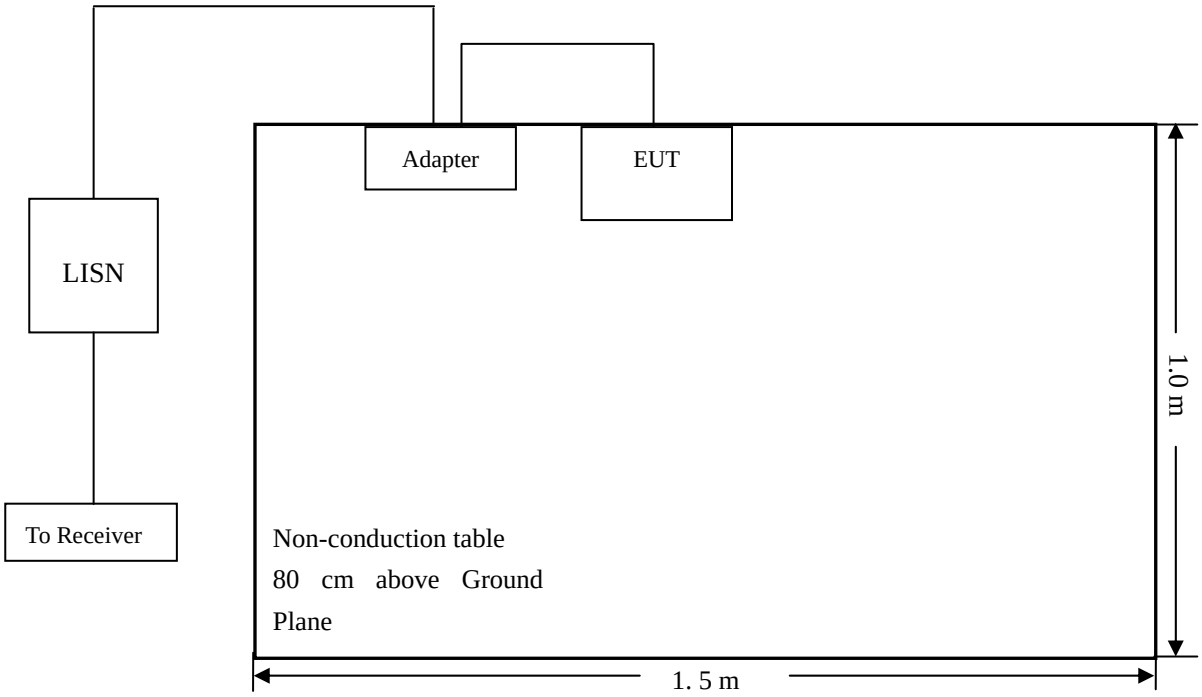
N/A: not applicable

3. Conducted Emissions

3.1 Test Procedure

Test is conducting under the description of ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

3.2 Basic Test Setup Block Diagram



3.3 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	52%
ATM Pressure:	1011 mbar

3.4 Summary of Test Results/Plots

According to the data in section 3.5, the EUT complied with the FCC Part 15.107(a) Conducted margin for a Class B device, with the *worst* margin reading of:

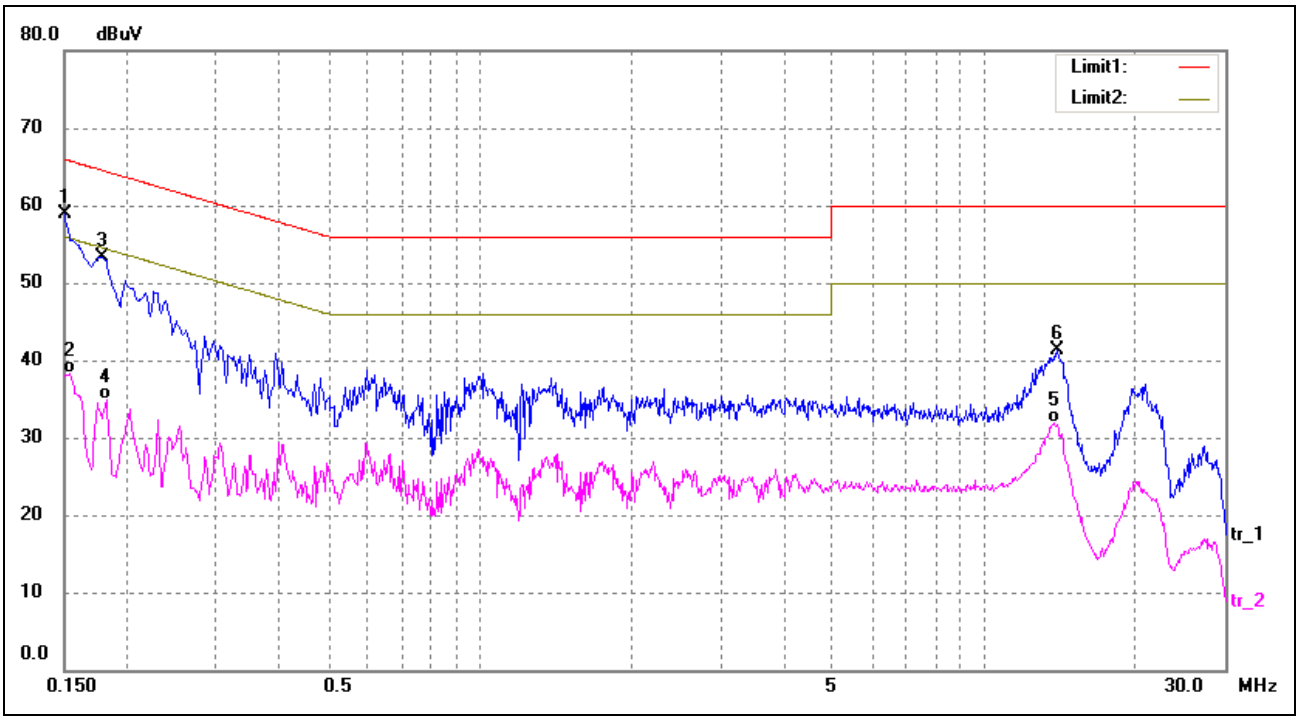
-6.50 dB at **0.1500 MHz** in the **Line, Peak** detector, 0.15-30MHz

3.5 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

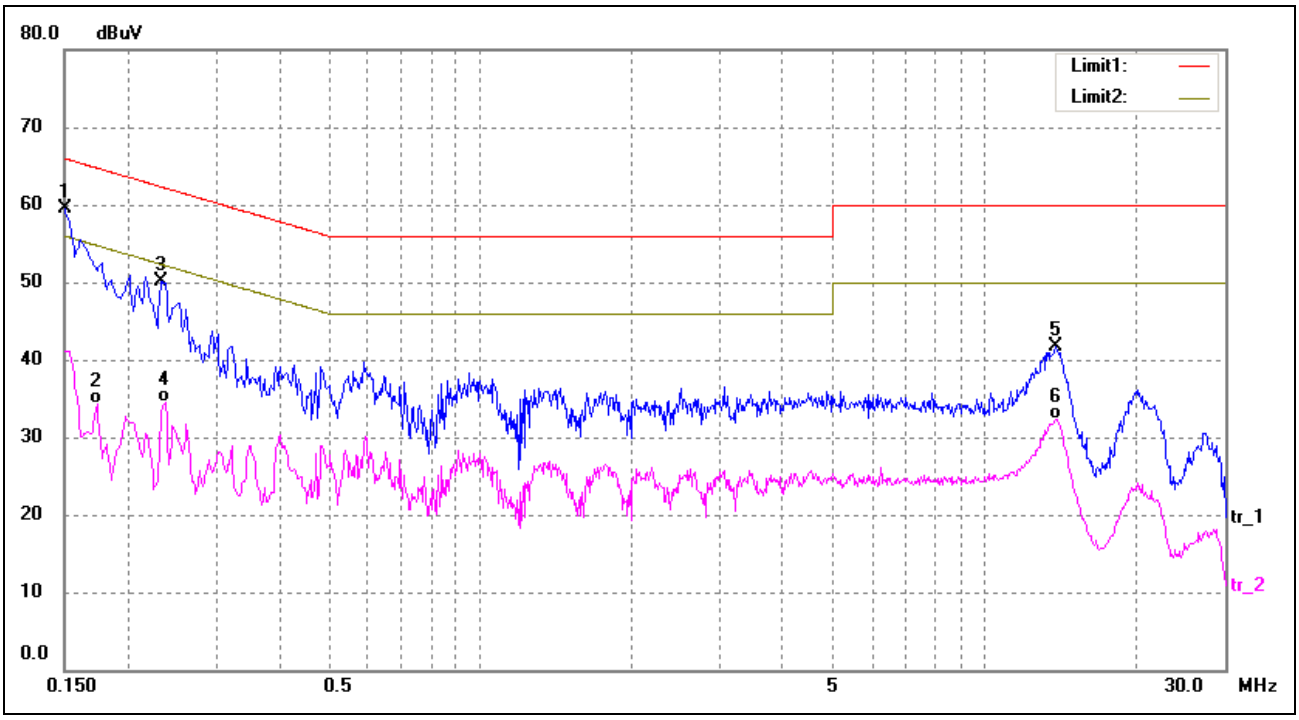
EUT: *Tablet PC*
Tested Model: *Tbook 10*
Operating Condition: *TM1*
Comment: *AC 120V/60Hz; Adapter DC 9V*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dB)	
1*	0.1500	49.41	9.50	58.91	66.00	-7.09	peak
2	0.1540	28.81	9.50	38.31	55.78	-17.47	AVG
3	0.1780	43.88	9.50	53.38	64.58	-11.20	peak
4	0.1820	25.34	9.50	34.84	54.39	-19.55	AVG
5	13.8220	21.48	10.41	31.89	50.00	-18.11	AVG
6	13.9340	30.86	10.41	41.27	60.00	-18.73	peak

Test Specification: *Line*

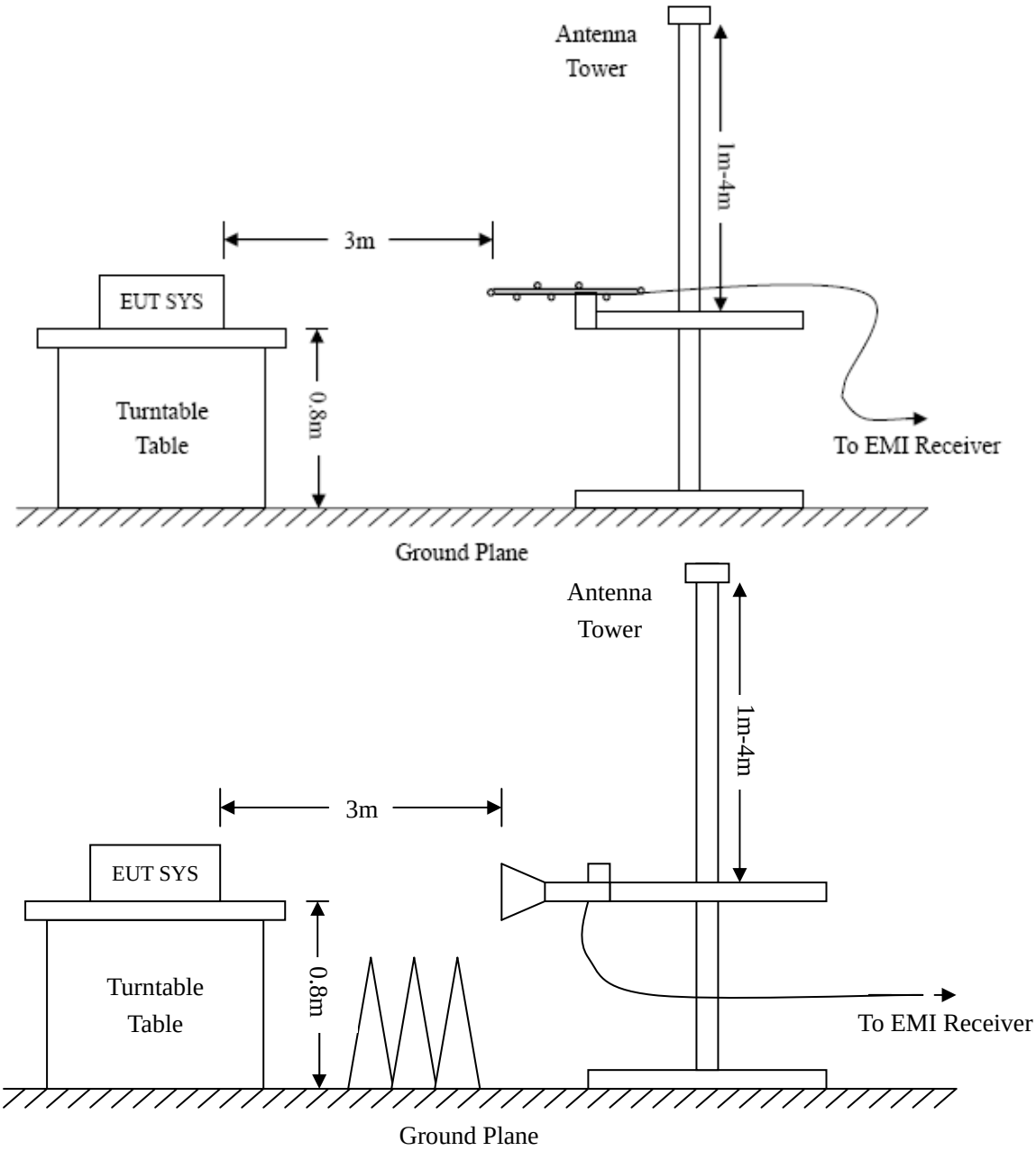


No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dB)	
1*	0.1500	50.00	9.50	59.50	66.00	-6.50	peak
2	0.1740	24.86	9.50	34.36	54.77	-20.41	AVG
3	0.2340	40.56	9.50	50.06	62.31	-12.25	peak
4	0.2380	25.07	9.50	34.57	52.17	-17.60	AVG
5	13.8580	31.21	10.41	41.62	60.00	-18.38	peak
6	13.8580	21.84	10.41	32.25	50.00	-17.75	AVG

4. Radiated Emissions

4.1 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15.109 Limit.
The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.
The spacing between the peripherals was 10 cm.



4.2 Test Receiver Setup

Frequency :9kHz-30MHz	Frequency :30MHz-1GHz	Frequency :Above 1GHz
RBW=10KHz,	RBW=120KHz,	RBW=1MHz,
VBW =30KHz	VBW=300KHz	VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto	Sweep time= Auto	Sweep time= Auto
Trace = max hold	Trace = max hold	Trace = max hold
Detector function = peak	Detector function = peak, QP	Detector function = peak, AV

4.3 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading – Corr. Factor

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dBμV means the emission is 6dBμV below the maximum limit for a Class B device. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – FCC Part 15.109(a) Limit

4.4 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	55 %
ATM Pressure:	1011 mbar

4.5 Summary of Test Results/Plots

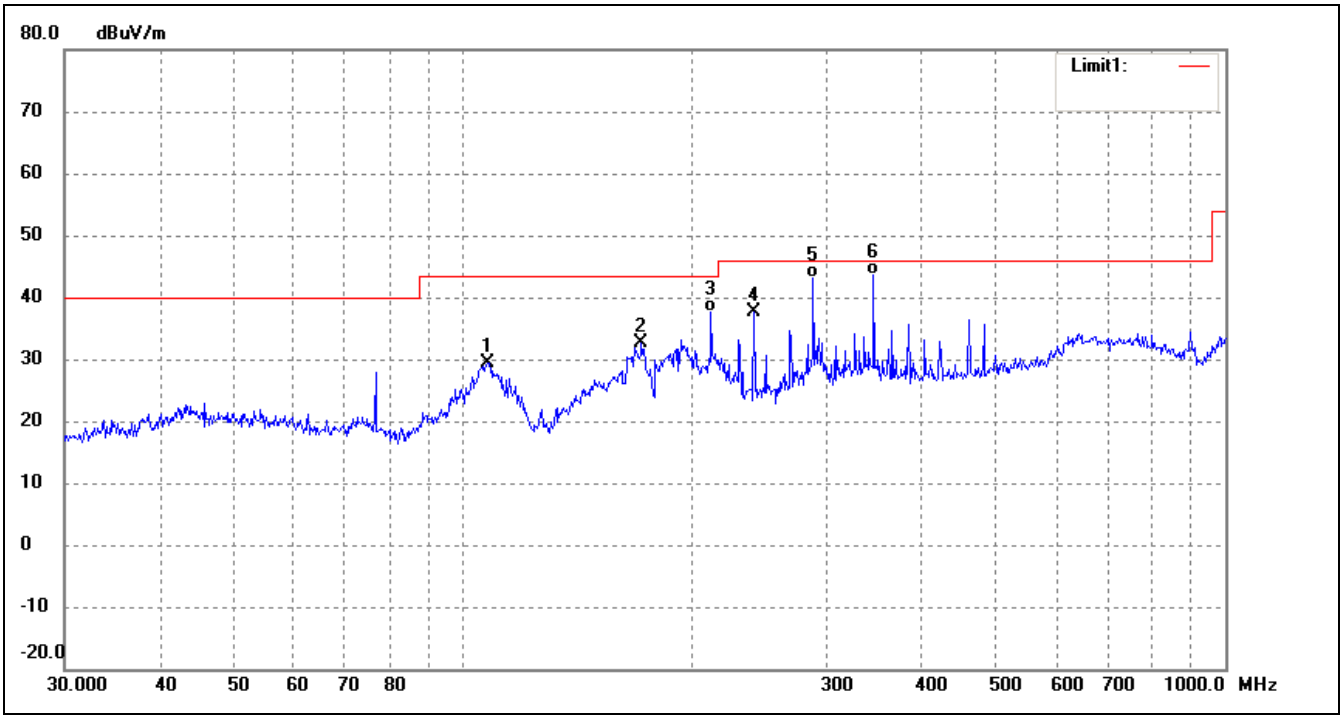
According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

-2.43dB at **345.5952 MHz** in the **Horizontal** polarization, TM1, **30MHz** to **9.2 GHz**, **3Meters**

Plot of Radiated Emissions Test Data

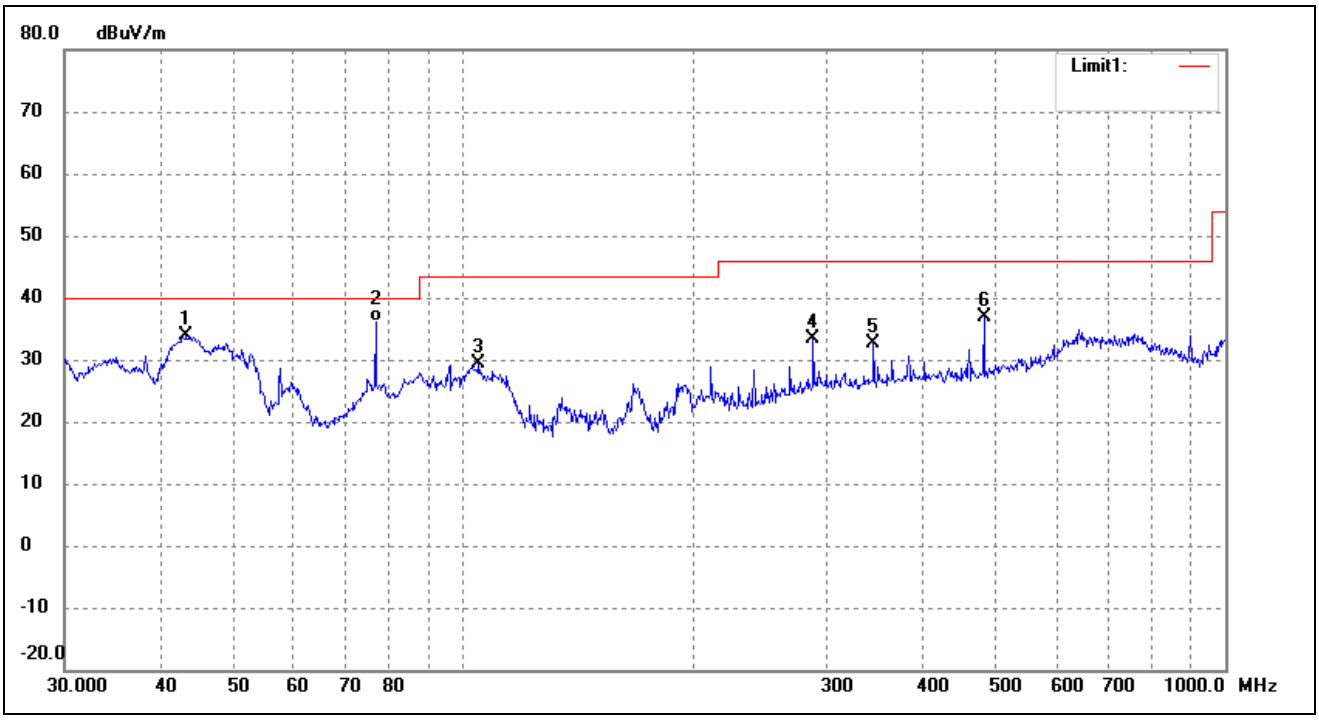
EUT: *Tablet PC*
Tested Model: *Tbook 10*
Operating Condition: *TM1*
Comment: *AC 120V/60Hz; Adapter DC 9V*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	107.8877	24.46	4.88	29.34	43.50	-14.16	42	100	peak
2	171.3926	30.14	2.47	32.61	43.50	-10.89	132	100	peak
3	211.5265	31.72	5.85	37.57	43.50	-5.93	168	100	QP
4	240.8304	28.55	8.96	37.51	46.00	-8.49	0	100	peak
5	287.9904	31.69	11.47	43.16	46.00	-2.84	45	100	QP
6	345.5952	32.05	11.52	43.57	46.00	-2.43	68	100	QP

Test Specification: *Vertical*

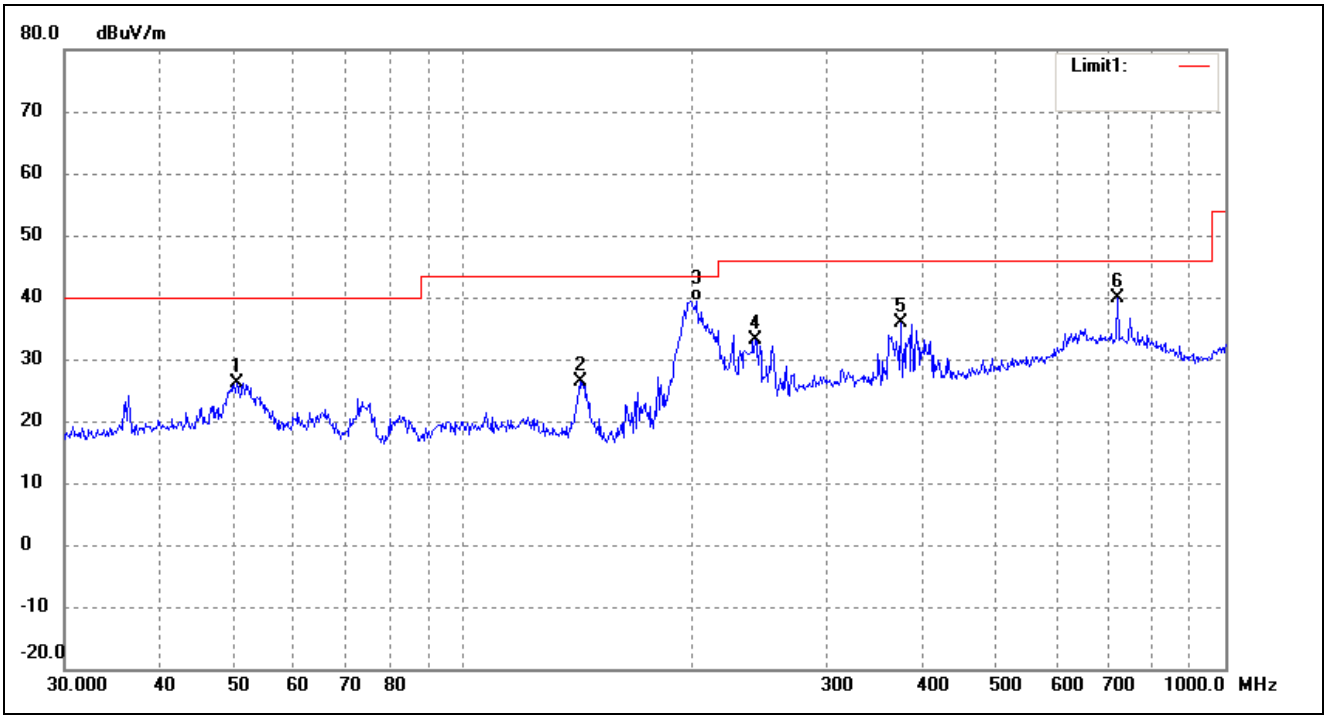


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	43.3534	28.94	4.94	33.88	40.00	-6.12	59	100	peak
2	76.7808	34.10	2.09	36.19	40.00	-3.81	147	100	QP
3	104.9033	24.62	4.88	29.50	43.50	-14.00	236	100	peak
4	287.9904	21.84	11.47	33.31	46.00	-12.69	158	100	peak
5	345.5952	21.21	11.52	32.73	46.00	-13.27	47	100	peak
6	482.2156	24.28	12.65	36.93	46.00	-9.07	82	100	peak

Plot of Radiated Emissions Test Data

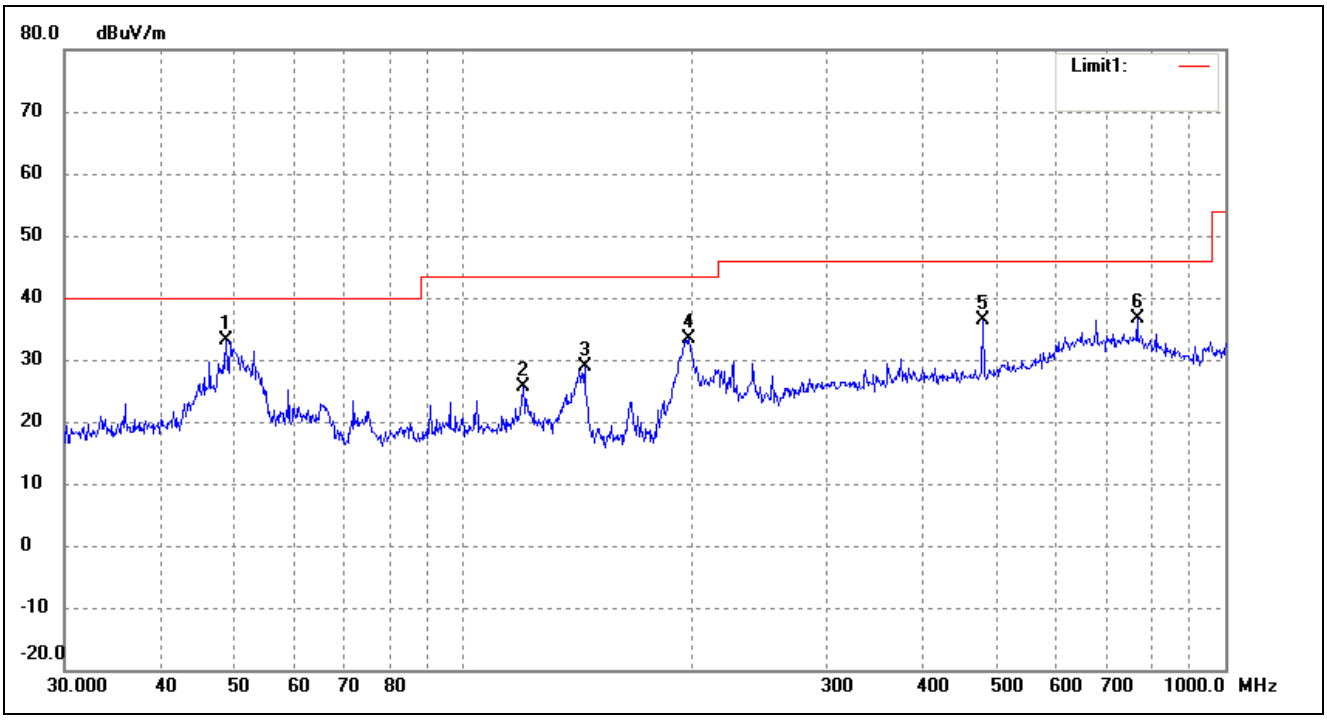
EUT: *Tablet PC*
Tested Model: *Tbook 10*
Operating Condition: *TM2*
Comment: *USB: DC5V*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	50.5860	21.21	5.00	26.21	40.00	-13.79	51	100	peak
2	142.3244	23.25	3.06	26.31	43.50	-17.19	124	100	peak
3	202.8104	35.43	3.97	39.40	43.50	-4.10	203	100	QP
4	241.6763	24.01	9.00	33.01	46.00	-12.99	86	100	peak
5	374.6226	23.98	11.82	35.80	46.00	-10.20	164	100	peak
6	721.7259	21.87	17.91	39.78	46.00	-6.22	103	100	peak

Test Specification: *Vertical*

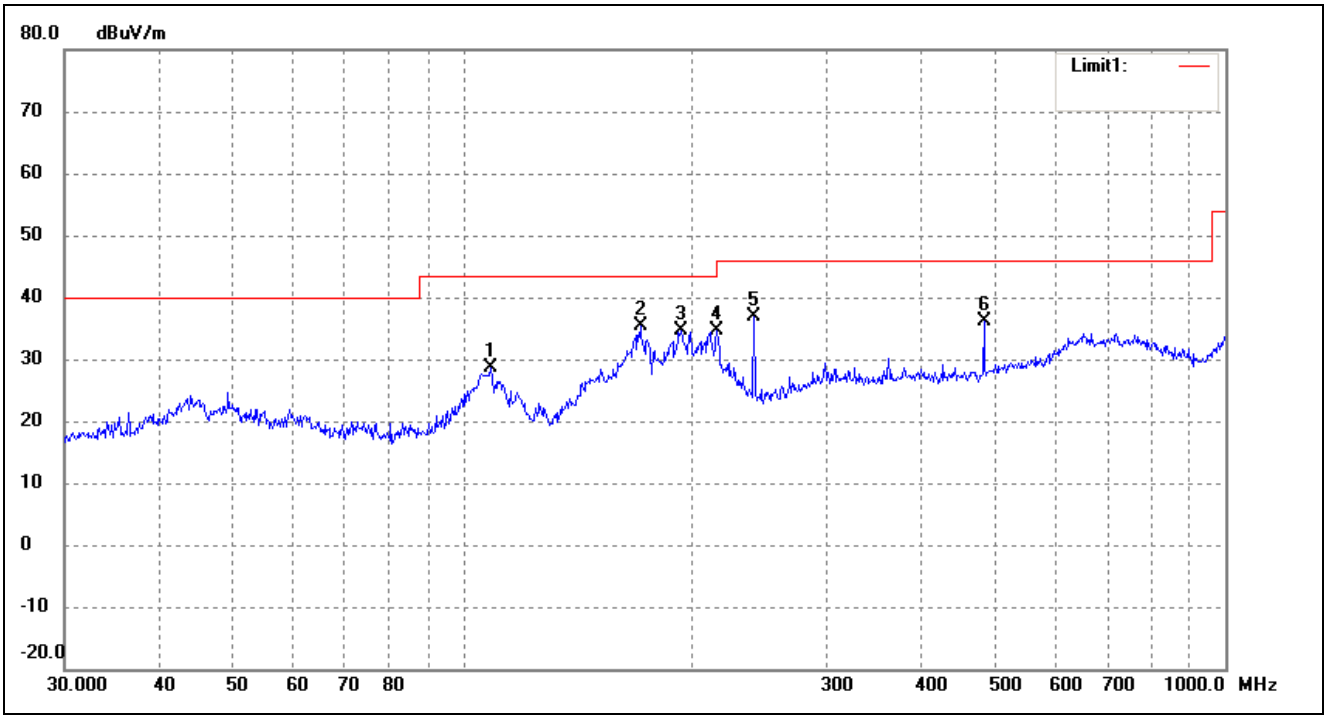


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	48.8429	28.26	4.97	33.23	40.00	-6.77	22	100	peak
2	119.8556	20.73	4.82	25.55	43.50	-17.95	146	100	peak
3	144.3348	25.79	2.98	28.77	43.50	-14.73	197	100	peak
4	197.8928	30.04	3.26	33.30	43.50	-10.20	375	100	peak
5	480.5276	23.80	12.58	36.38	46.00	-9.62	24	100	peak
6	766.0572	18.84	17.79	36.63	46.00	-9.37	82	100	peak

Plot of Radiated Emissions Test Data

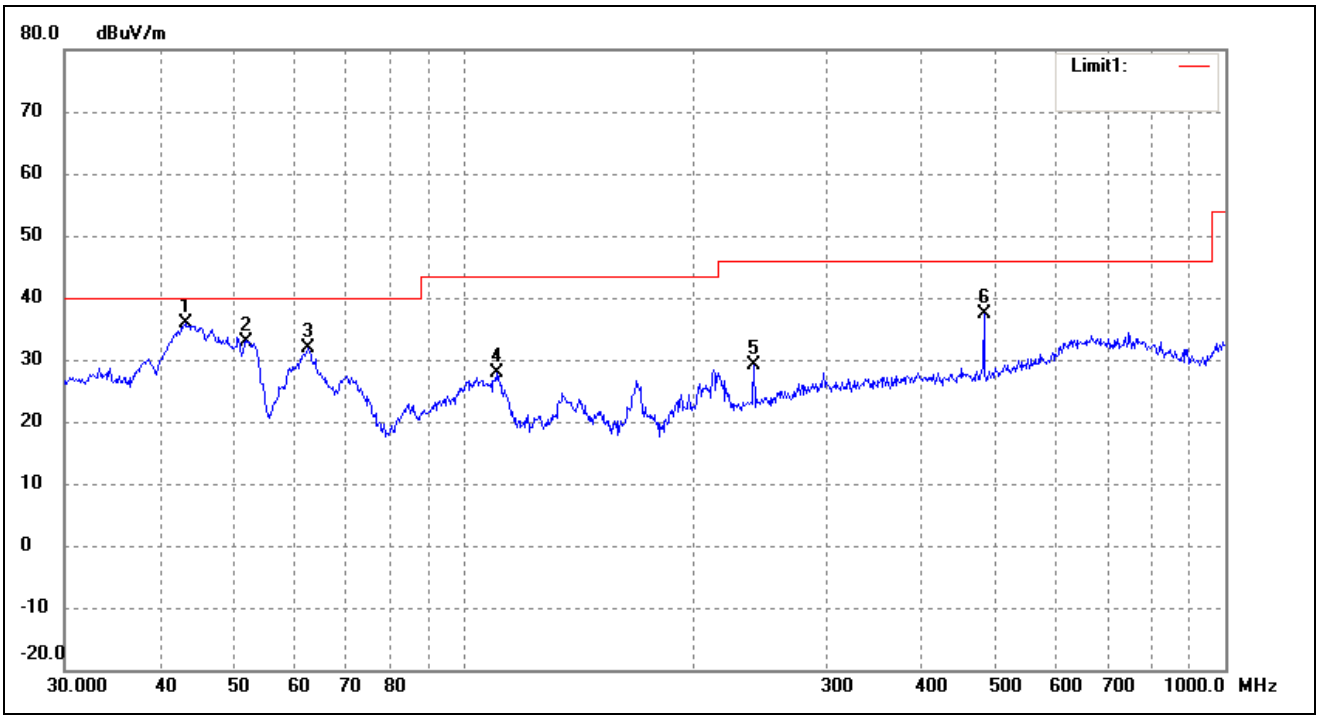
EUT: *Tablet PC*
Tested Model: *Tbook 10*
Operating Condition: *TM3*
Comment: *DC 3.8V*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	108.6470	23.66	4.87	28.53	43.50	-14.97	158	100	peak
2	170.7926	32.93	2.46	35.39	43.50	-8.11	0	100	peak
3	193.0945	31.69	3.04	34.73	43.50	-8.77	147	100	peak
4	215.2678	27.91	6.65	34.56	43.50	-8.94	352	100	peak
5	240.8304	27.88	8.96	36.84	46.00	-9.16	32	100	peak
6	482.2156	23.50	12.65	36.15	46.00	-9.85	83	100	peak

Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	43.3534	31.02	4.94	35.96	40.00	-4.04	76	100	peak
2	52.0251	27.96	5.04	33.00	40.00	-7.00	288	100	peak
3	62.6507	27.38	4.49	31.87	40.00	-8.13	10	100	peak
4	110.5687	22.91	4.87	27.78	43.50	-15.72	11	100	peak
5	240.8304	20.26	8.96	29.22	46.00	-16.78	63	100	peak
6	482.2156	24.77	12.65	37.42	46.00	-8.58	92	100	peak

Note: Testing is carried out with frequency rang 30MHz to the 9.2GHz, which above 1GHz is close to the noise base even antenna close up to 1meter distance according the measurement of ANSI C63.4.

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