

FCC Part 15B Measurement and Test Report

For

Amelia World Corporation dba LINSAY

1841 NE 146 Street Miami, Florida

FCC ID: 2AAC3F-10XIPS

Test Rule(s):	<u>FCC Part 15 Subpart B</u>
Product Description:	<u>Tablet PC</u>
Tested Model:	<u>F-10XIPS</u>
Report No.:	<u>STR16128186I-2</u>
Tested Date:	<u>2016-12-19 to 2017-01-17</u>
Issued Date:	<u>2017-01-18</u>
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Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen SEM.Test Technology Co., Ltd.

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: Amelia World Corporation dba LINSAY
Address of applicant: 1841 NE 146 Street Miami, Florida

Manufacturer: Amelia World Corporation dba LINSAY
Address of manufacturer: 1841 NE 146 Street Miami, Florida

General Description of EUT

Product Name:	Tablet PC
Trade Name:	LINSAY
Model No.:	F-10XIPS
Adding Model(s):	/

Note: The test data is gathered from a production sample, provided by the manufacturer.

Technical Characteristics of EUT

Rated Voltage:	DC 3.7V
Rated Current:	/
Rated Power:	/
Power Adapter Model:	/
Lowest Internal Frequency of EUT:	32.768kHz
Highest Internal Frequency of EUT:	1.5GHz

1.2 Test Standards

The following report is prepared on behalf of the Amelia World Corporation dba LINSAY 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 & Back Camera	AC Adapter
TM2	Charging & Front Camera	AC Adapter
TM3	Charging & USB Playing	AC Adapter
TM4	Charging & TF Card Playing	AC Adapter
TM5	Downloading	Connected to PC

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
USB Cable	0.8M	Shielded	Without Core
OTG Cable	0.12M	Shielded	Without Core

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
USB disk	Kingston	DTGE9	/
Earphone	/	/	/
TF Card	SanDisk	Ultra	/
Mouse	DELL	/	/
Notebook	ASUS	X42J	/
PC	DELL	/	/

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
/	/	/	/

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Conducted Emissions	Conducted	$\pm 2.88\text{dB}$
Transmitter Spurious Emissions	Radiated	$\pm 5.1\text{dB}$

1.7 Test Equipment List and Details

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
SEMT-1072	Spectrum Analyzer	Agilent	E4407B	MY41440400	2016-06-04	2017-06-03
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2016-06-04	2017-06-03
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2016-06-04	2017-06-03
SEMT-1008	Amplifier	Agilent	8447F	3113A06717	2016-06-04	2017-06-03
SEMT-1043	Amplifier	C&D	PAP-1G18	2002	2016-06-04	2017-06-03
SEMT-1011	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2016-06-04	2017-06-03
SEMT-1042	Horn Antenna	ETS	3117	00086197	2016-06-04	2017-06-03
SEMT-1069	Loop Antenna	Schwarz beck	FMZB 1516	9773	2016-06-04	2017-06-03
SEMT-1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2016-06-04	2017-06-03
SEMT-1003	L.I.S.N	Schwarz beck	NSLK8126	8126-224	2016-06-04	2017-06-03
SEMT-1002	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2016-06-04	2017-06-03

2. SUMMARY OF TEST RESULTS

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

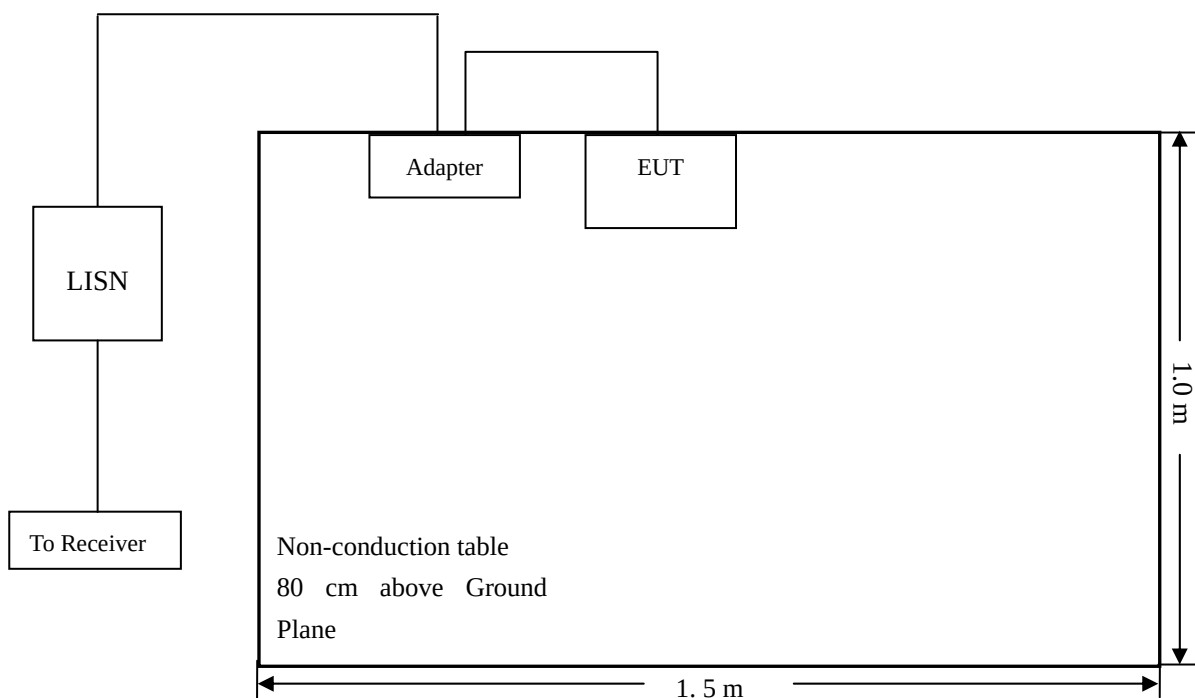
N/A: not applicable

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 3.6, the EUT complied with the FCC Part 15.107(a) Conducted margin for a Class B device, with the *worst* margin reading of:

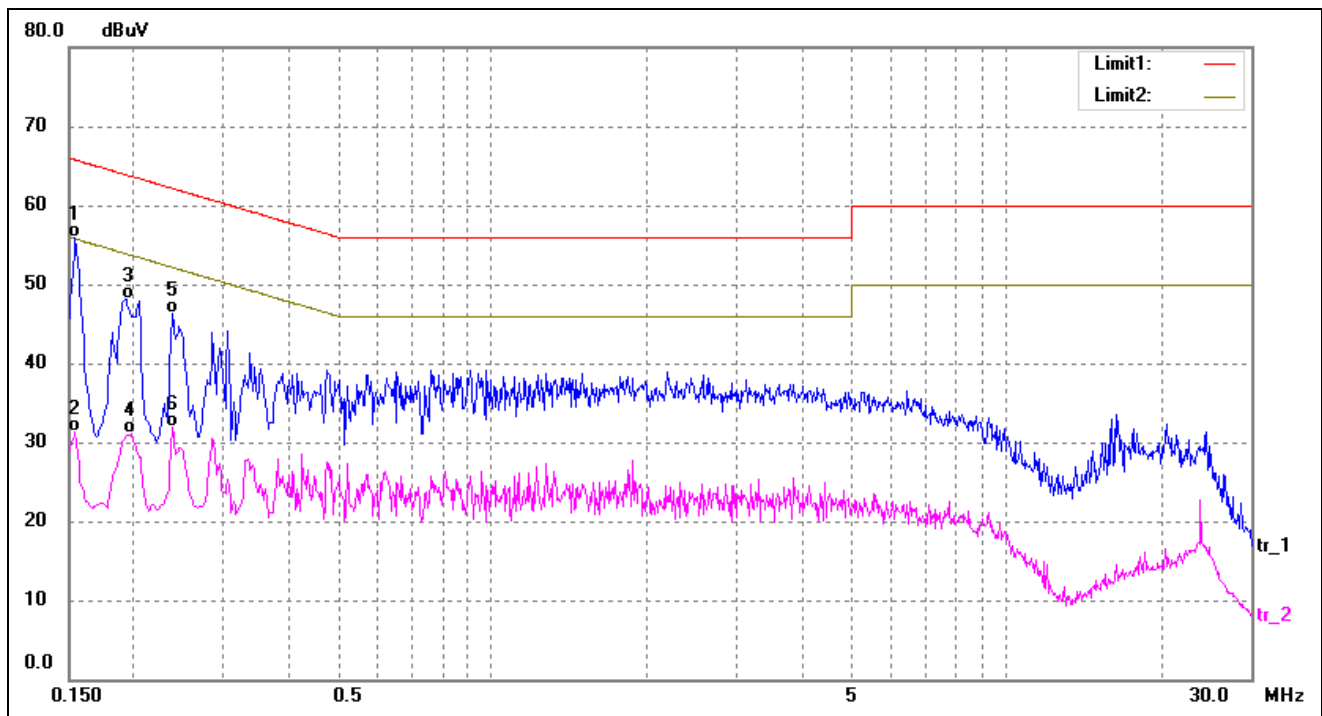
-9.79 dB at 0.1540 MHz in the Neutral, at TM1, QP detector, 0.15-30MHz

3.5 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

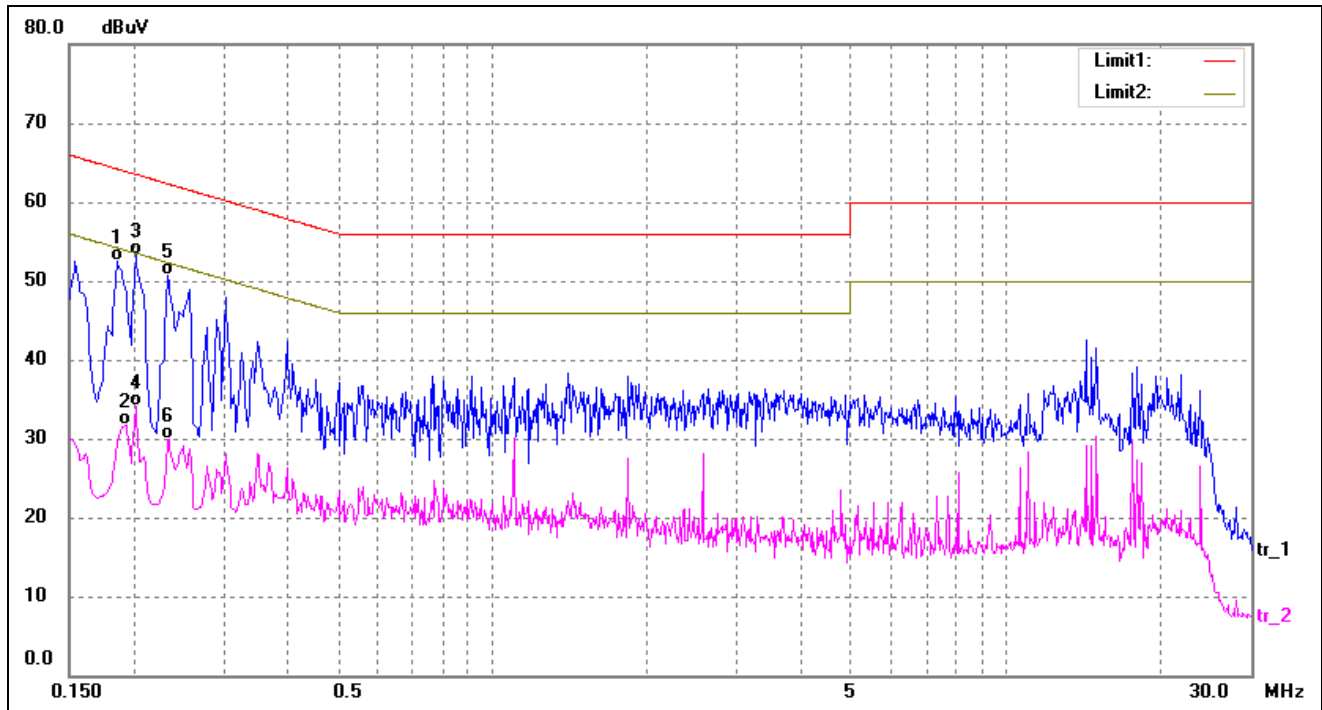
EUT: Tablet PC
Tested Model: F-10XIPS
Operating Condition: TM1 (Worst case)
Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1540	46.14	9.85	55.99	65.78	-9.79	QP
2	0.1540	21.39	9.85	31.24	55.78	-24.54	AVG
3	0.1940	38.39	9.81	48.20	63.86	-15.66	QP
4	0.1980	21.28	9.80	31.08	53.69	-22.61	AVG
5	0.2380	36.48	9.80	46.28	62.17	-15.89	QP
6	0.2380	22.13	9.80	31.93	52.17	-20.24	AVG

Test Specification: Line

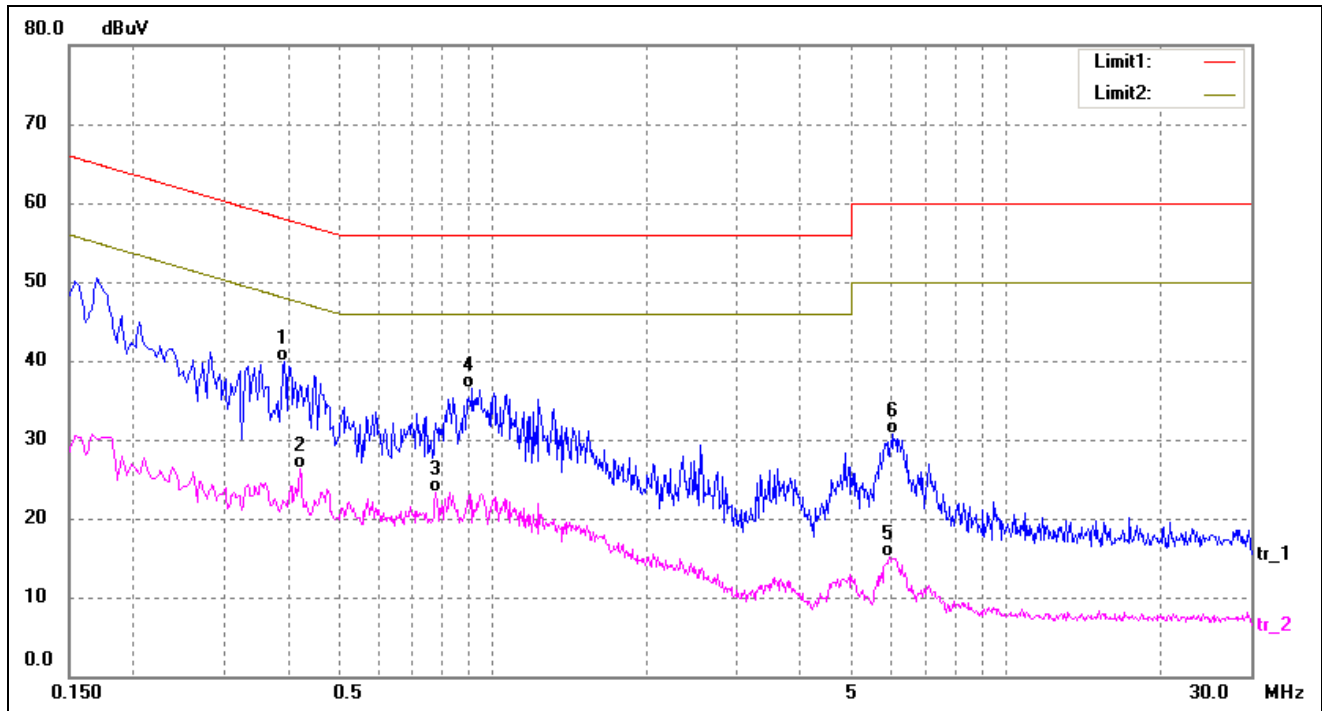


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1860	42.73	9.81	52.54	64.21	-11.67	QP
2	0.1940	21.96	9.81	31.77	53.86	-22.09	AVG
3*	0.2020	43.50	9.80	53.30	63.53	-10.23	QP
4	0.2020	24.36	9.80	34.16	53.53	-19.37	AVG
5	0.2340	40.99	9.80	50.79	62.31	-11.52	QP
6	0.2340	20.08	9.80	29.88	52.31	-22.43	AVG

Plot of Conducted Emissions Test Data

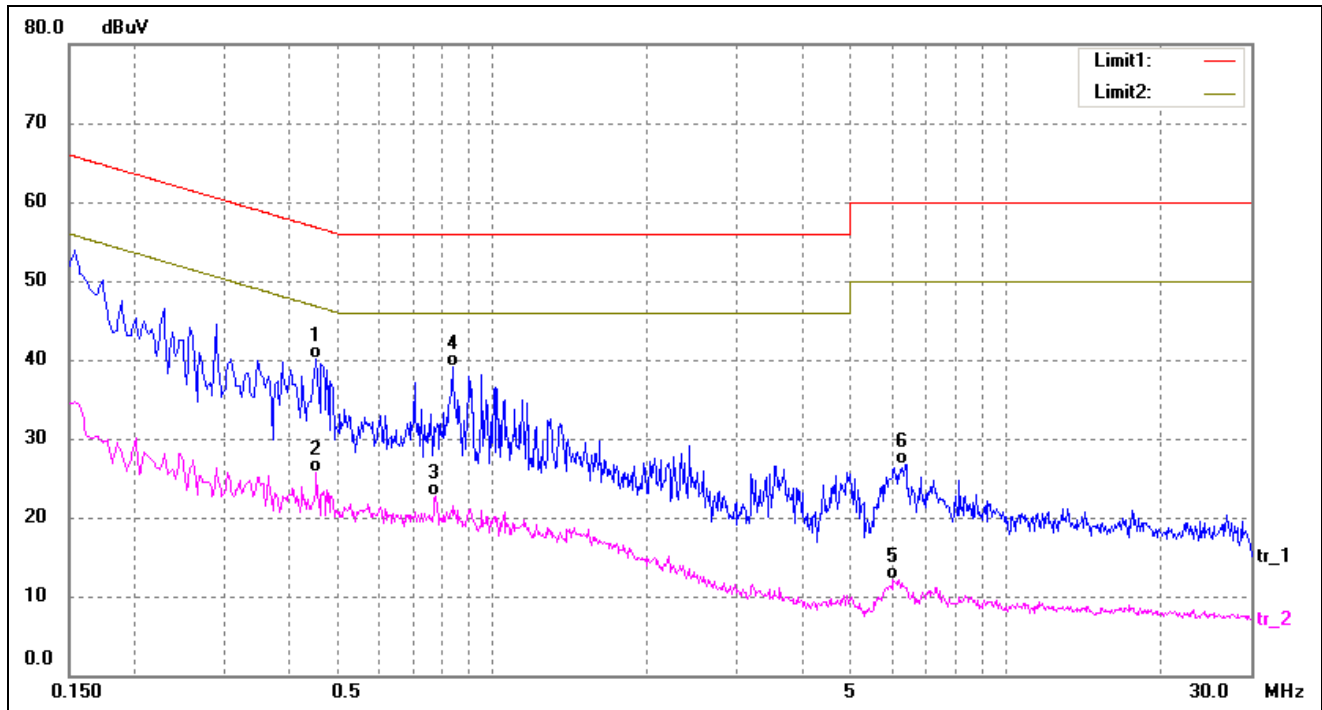
EUT: Tablet PC
Tested Model: F-10XIPS
Operating Condition: TM5
Comment: AC 120V/60Hz, USB 5V

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.3940	30.20	9.80	40.00	57.98	-17.98	QP
2	0.4220	16.45	9.80	26.25	47.41	-21.16	AVG
3	0.7780	13.61	9.78	23.39	46.00	-22.61	AVG
4	0.9140	26.67	9.77	36.44	56.00	-19.56	QP
5	5.9340	5.49	9.63	15.12	50.00	-34.88	AVG
6	6.0540	21.02	9.63	30.65	60.00	-29.35	QP

Test Specification: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.4540	30.23	9.80	40.03	56.80	-16.77	QP
2	0.4540	15.84	9.80	25.64	46.80	-21.16	AVG
3	0.7780	12.98	9.78	22.76	46.00	-23.24	AVG
4	0.8380	29.26	9.77	39.03	56.00	-16.97	QP
5	6.0420	2.51	9.63	12.14	50.00	-37.86	AVG
6	6.4140	17.06	9.62	26.68	60.00	-33.32	QP

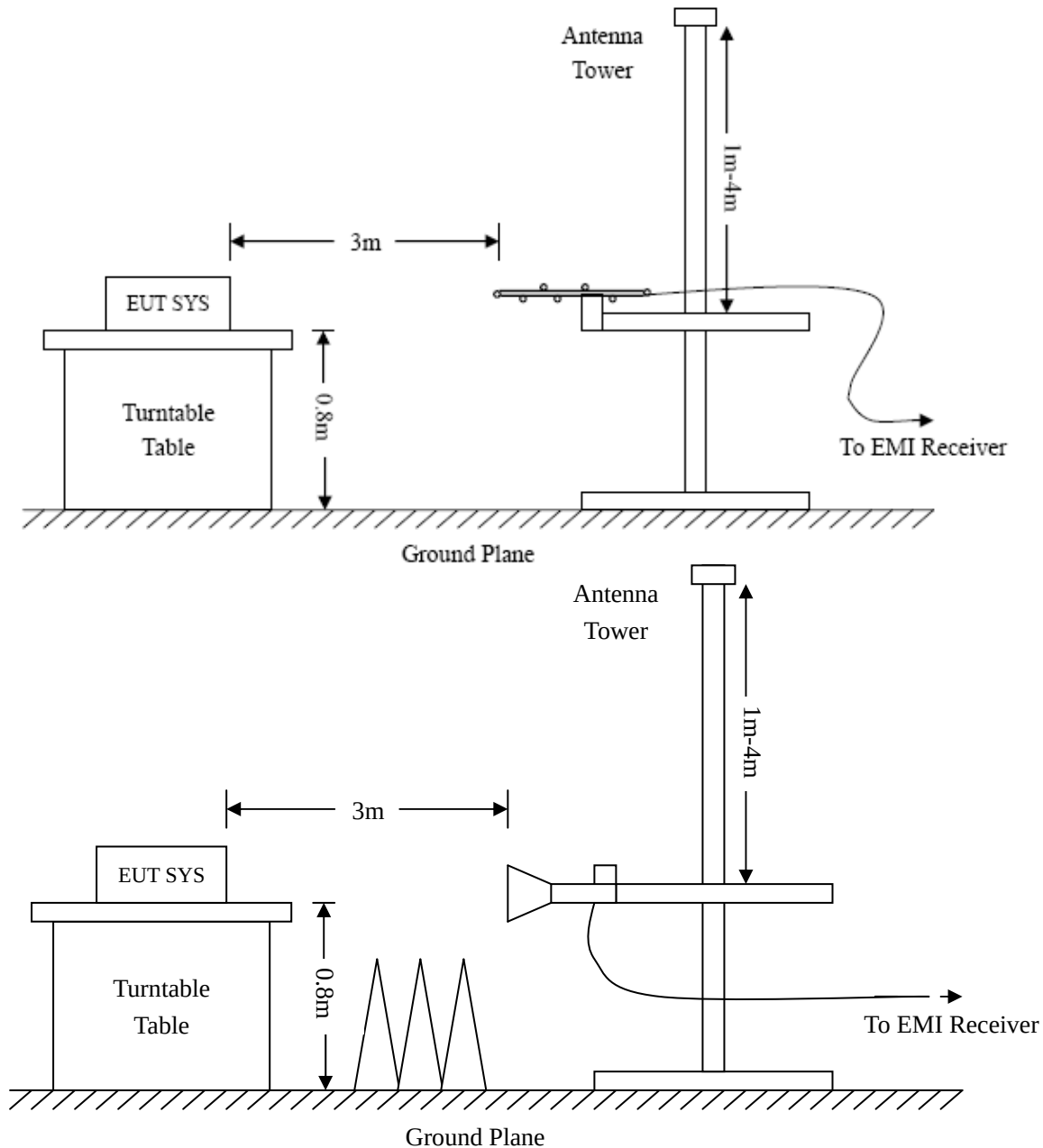
4. Radiated Emissions

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

RBW=10KHz,

VBW =30KHz

Sweep time= Auto

Trace = max hold

Detector function = peak

Frequency :30MHz-1GHz

RBW=120KHz,

VBW=300KHz

Sweep time= Auto

Trace = max hold

Detector function = peak, QP

Frequency :Above 1GHz

RBW=1MHz,

VBW=3MHz(Peak), 10Hz(AV)

Sweep time= Auto

Trace = max hold

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:

$$\text{Corr. Ampl.} = \text{Indicated Reading} - \text{Corr. Factor}$$

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

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15.109(a) Limit}$$

4.4 Environmental Conditions

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

4.5 Summary of Test Results/Plots

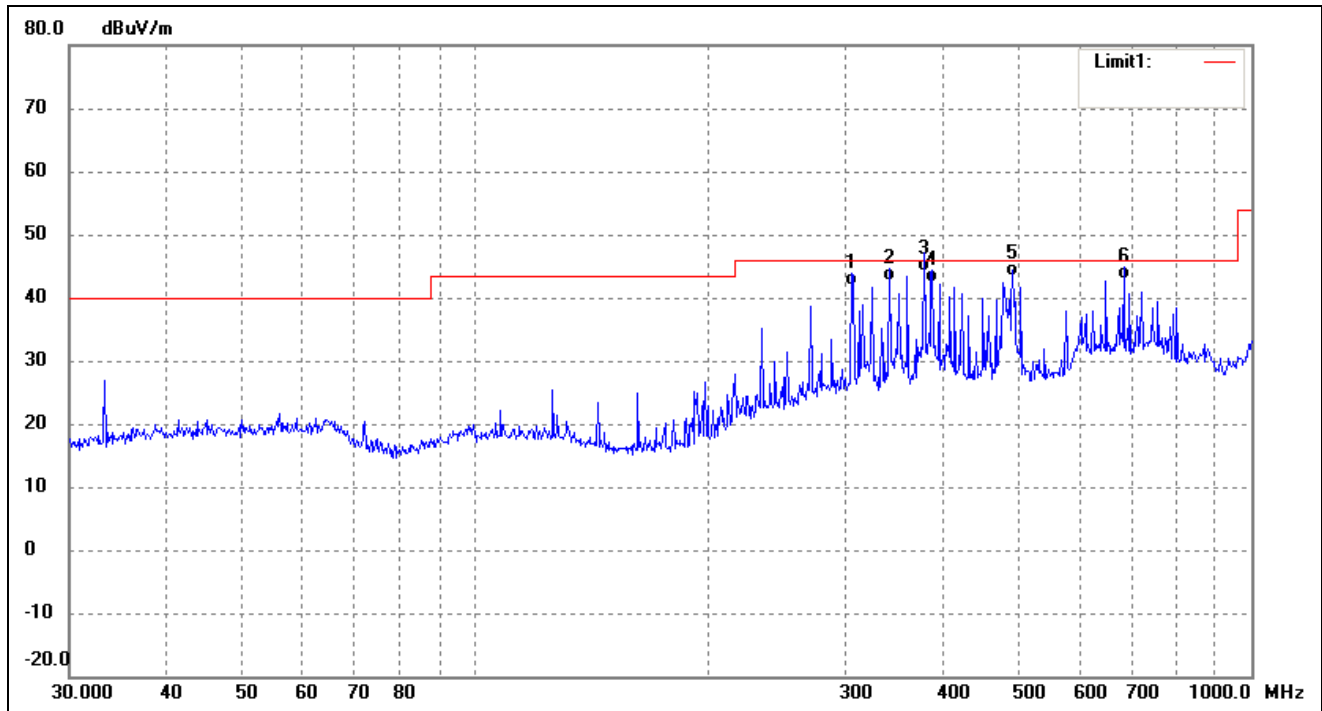
According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

-1.89 dB at 378.5843 MHz in the Horizontal polarization, TM1 Mode, 30MHz to 12.75 GHz, 3Meters

Plot of Radiated Emissions Test Data

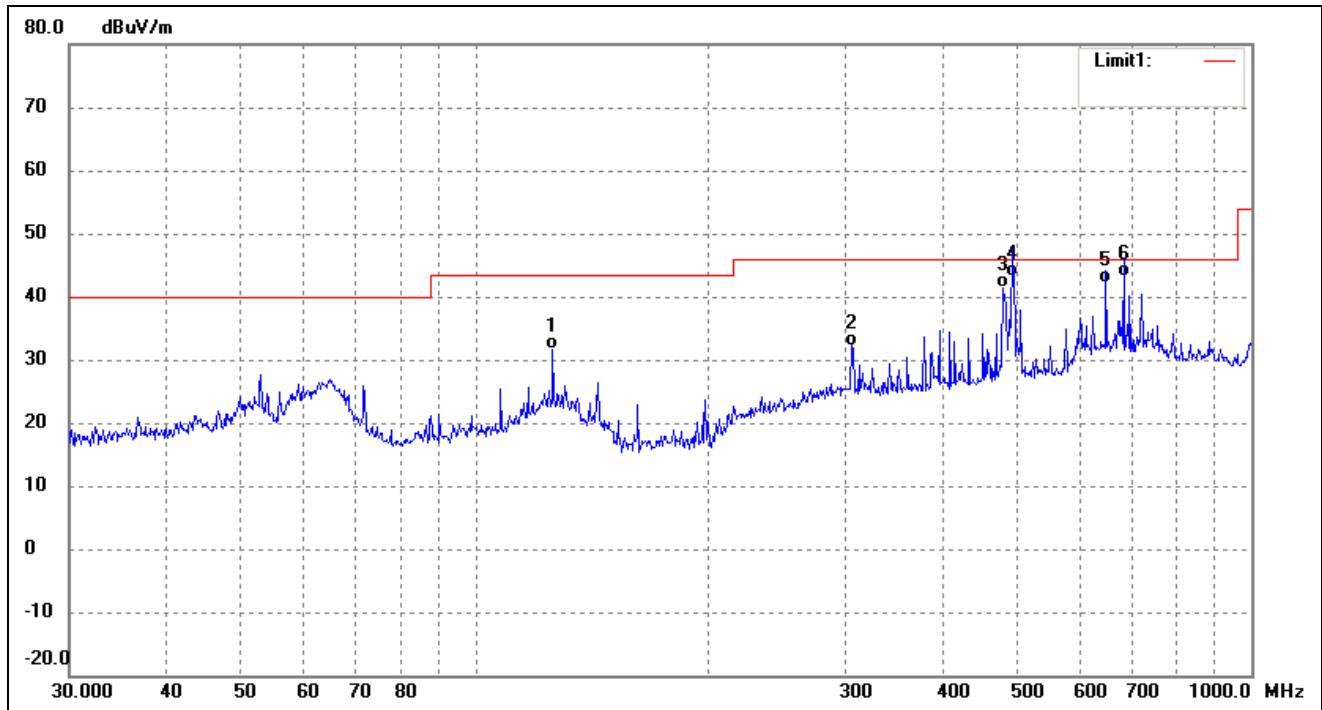
EUT: Tablet PC
Tested Model: F-10XIPS
Operating Condition: TM1
Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	305.6800	29.82	11.94	41.76	46.00	-4.24	166	100	QP
2	341.9786	31.23	11.43	42.66	46.00	-3.34	192	100	QP
3	378.5843	32.31	11.80	44.11	46.00	-1.89	199	100	QP
4	387.9920	30.13	12.14	42.27	46.00	-3.73	88	100	QP
5	492.4685	30.45	13.04	43.49	46.00	-2.51	282	100	QP
6	684.7454	24.44	18.33	42.77	46.00	-3.23	275	100	QP

Test Specification: Vertical

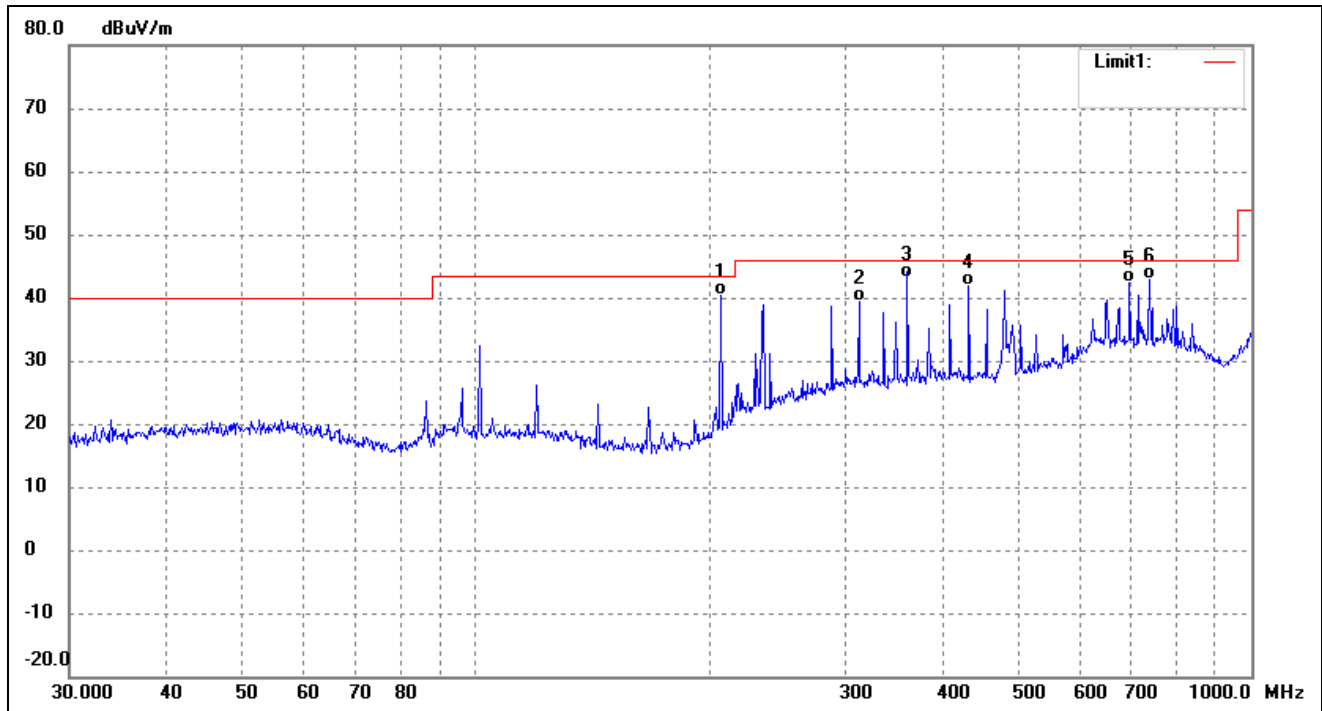


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	125.8864	27.32	4.33	31.65	43.50	-11.85	177	100	QP
2	305.6800	20.31	11.94	32.25	46.00	-13.75	110	100	QP
3	478.8455	28.81	12.59	41.40	46.00	-4.60	89	100	QP
4	492.4685	30.00	13.04	43.04	46.00	-2.96	80	100	QP
5	649.6597	24.39	17.84	42.23	46.00	-3.77	129	100	QP
6	684.7454	24.88	18.33	43.21	46.00	-2.79	173	100	QP

Plot of Radiated Emissions Test Data

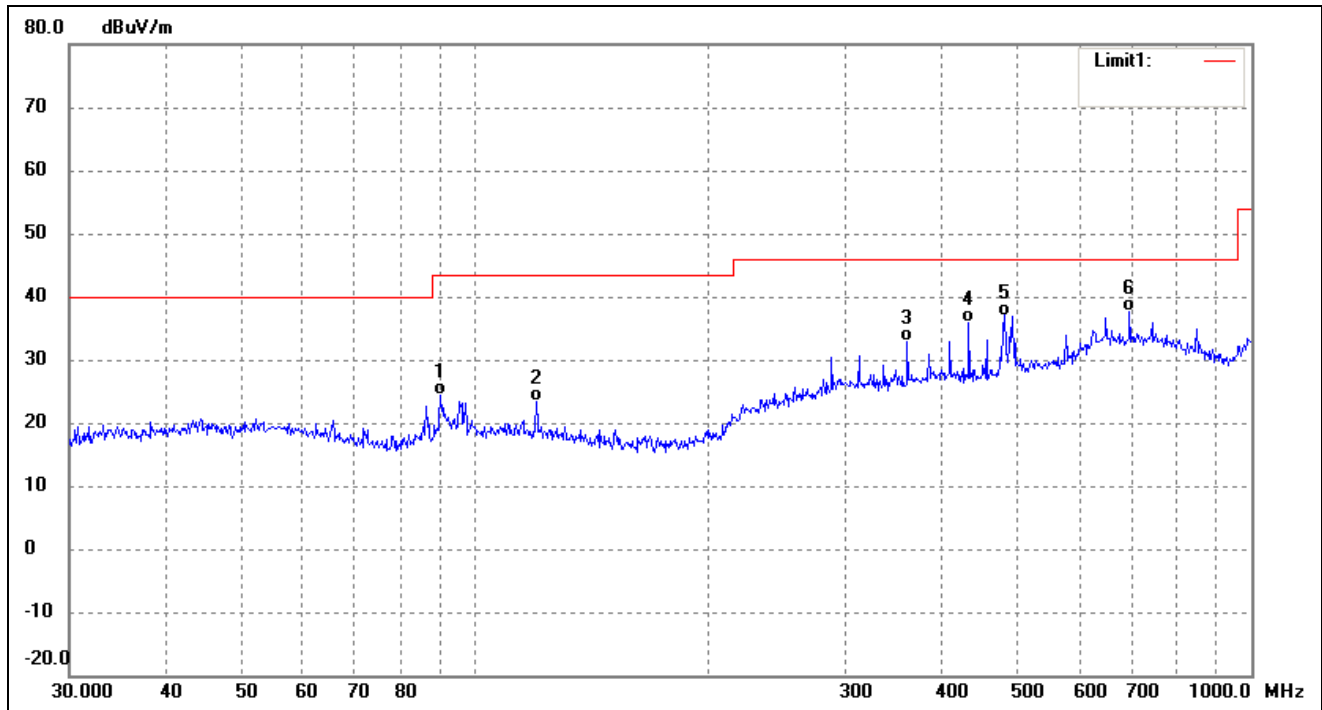
EUT: Tablet PC
Tested Model: F-10XIPS
Operating Condition: TM2
Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	207.1226	35.43	4.90	40.33	43.50	-3.17	91	100	QP
2	312.1794	27.43	11.95	39.38	46.00	-6.62	336	100	QP
3	360.4477	31.13	11.90	43.03	46.00	-2.97	166	100	QP
4	432.5457	29.57	12.26	41.83	46.00	-4.17	89	100	QP
5	696.8567	24.84	17.43	42.27	46.00	-3.73	63	100	QP
6	739.6605	23.92	19.00	42.92	46.00	-3.08	167	100	QP

Test Specification: Vertical

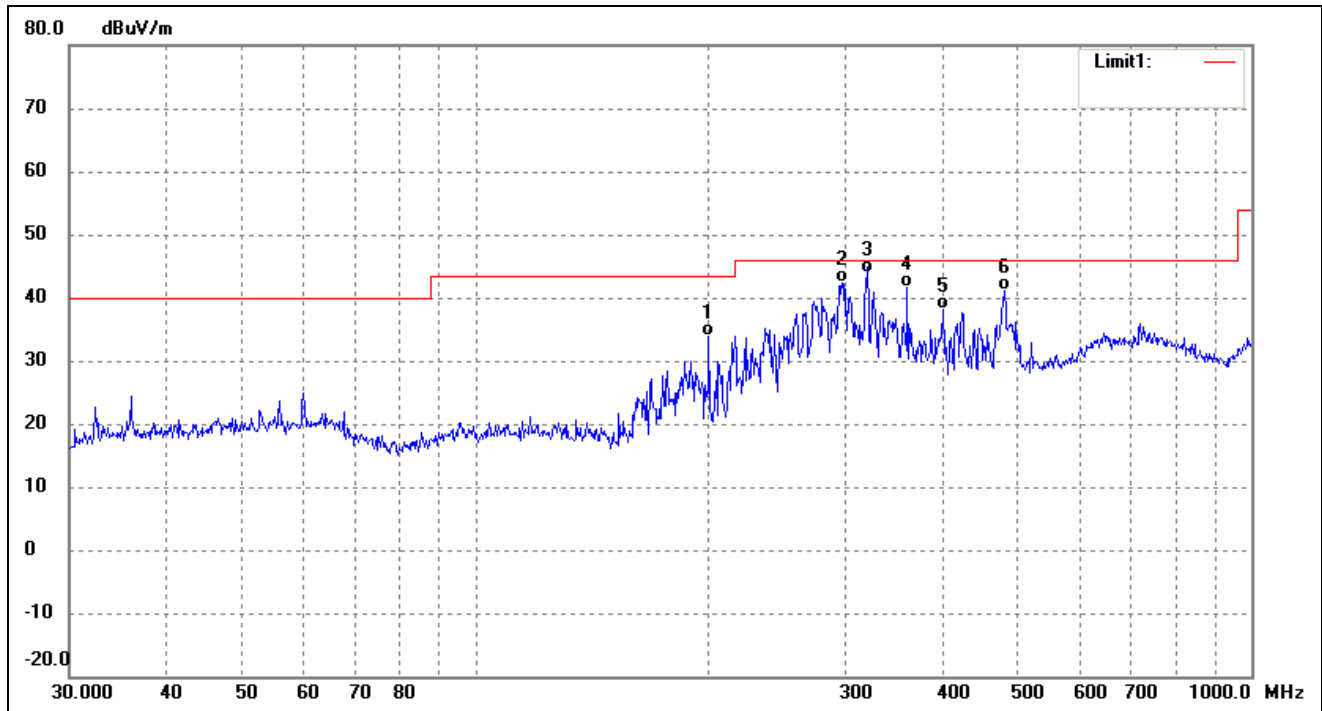


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	90.2205	20.99	3.44	24.43	43.50	-19.07	151	100	QP
2	119.8556	18.53	4.82	23.35	43.50	-20.15	133	100	QP
3	360.4477	21.10	11.90	33.00	46.00	-13.00	285	100	QP
4	432.5457	23.58	12.26	35.84	46.00	-10.16	96	100	QP
5	480.5276	24.42	12.58	37.00	46.00	-9.00	63	100	QP
6	696.8567	20.22	17.43	37.65	46.00	-8.35	113	100	QP

Plot of Radiated Emissions Test Data

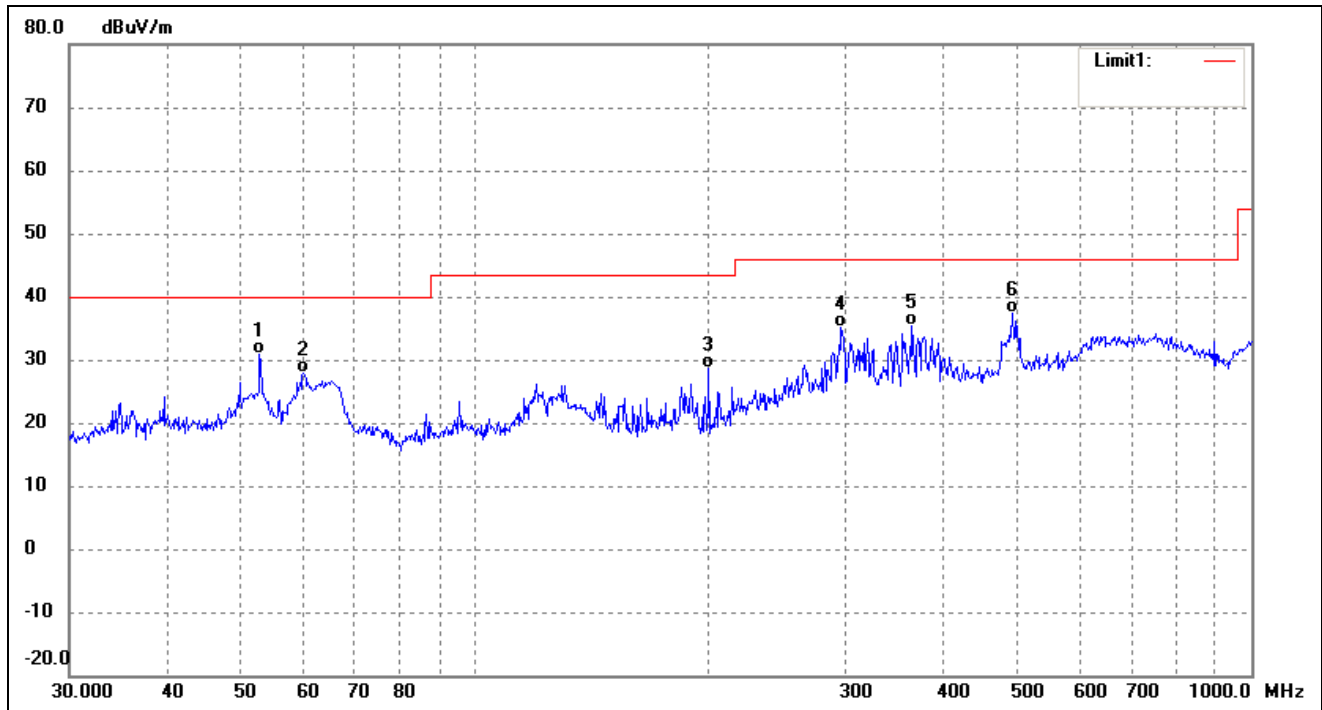
EUT: Tablet PC
Tested Model: F-10XIPS
Operating Condition: TM3
Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	199.9856	30.63	3.36	33.99	43.50	-9.51	192	100	QP
2	297.2241	30.53	11.84	42.37	46.00	-3.63	174	100	QP
3	319.9370	32.00	11.95	43.95	46.00	-2.05	272	100	QP
4	360.4476	29.73	11.90	41.63	46.00	-4.37	79	100	QP
5	400.4319	25.36	12.67	38.03	46.00	-7.97	106	100	QP
6	480.5276	28.47	12.58	41.05	46.00	-4.95	130	100	QP

Test Specification: Vertical

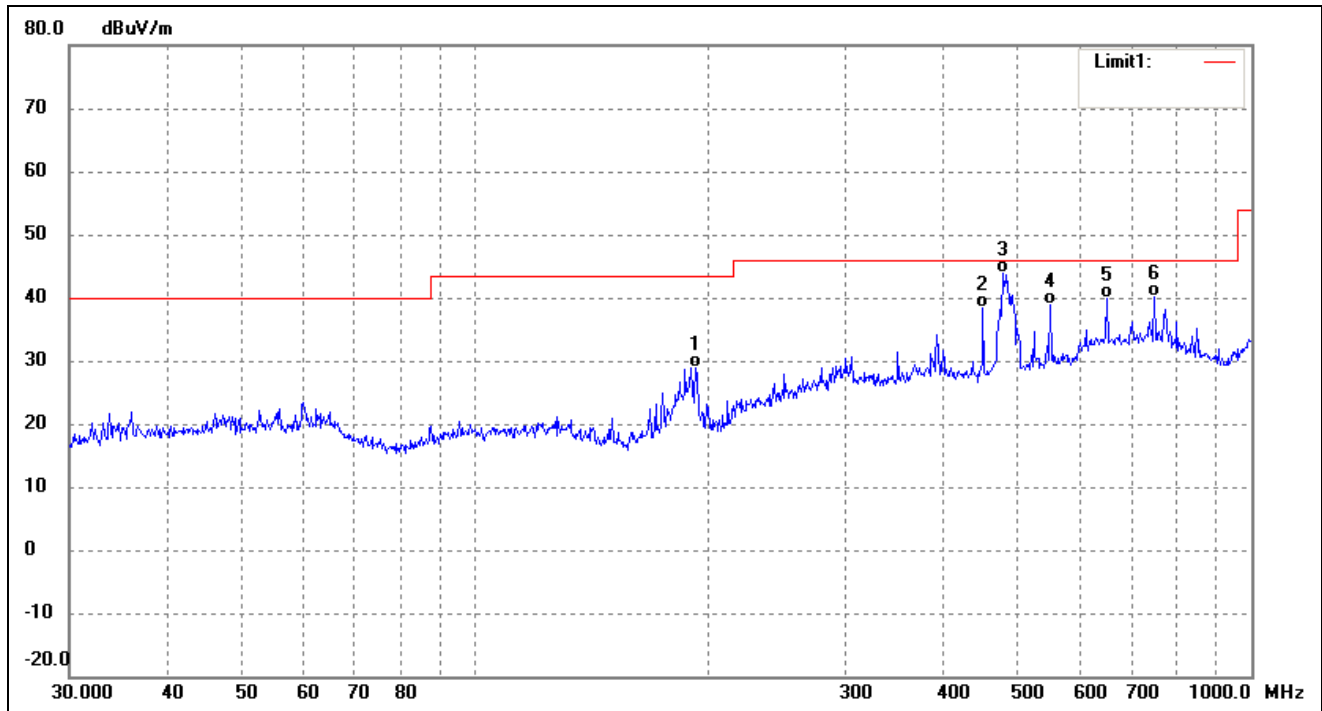


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	52.7600	25.75	5.06	30.81	40.00	-9.19	181	100	QP
2	60.0691	22.83	5.02	27.85	40.00	-12.15	156	100	QP
3	199.9856	25.17	3.36	28.53	43.50	-14.97	171	100	QP
4	296.1836	23.23	11.81	35.04	46.00	-10.96	93	100	QP
5	365.5391	23.45	11.87	35.32	46.00	-10.68	266	100	QP
6	492.4685	24.40	13.04	37.44	46.00	-8.56	318	100	QP

Plot of Radiated Emissions Test Data

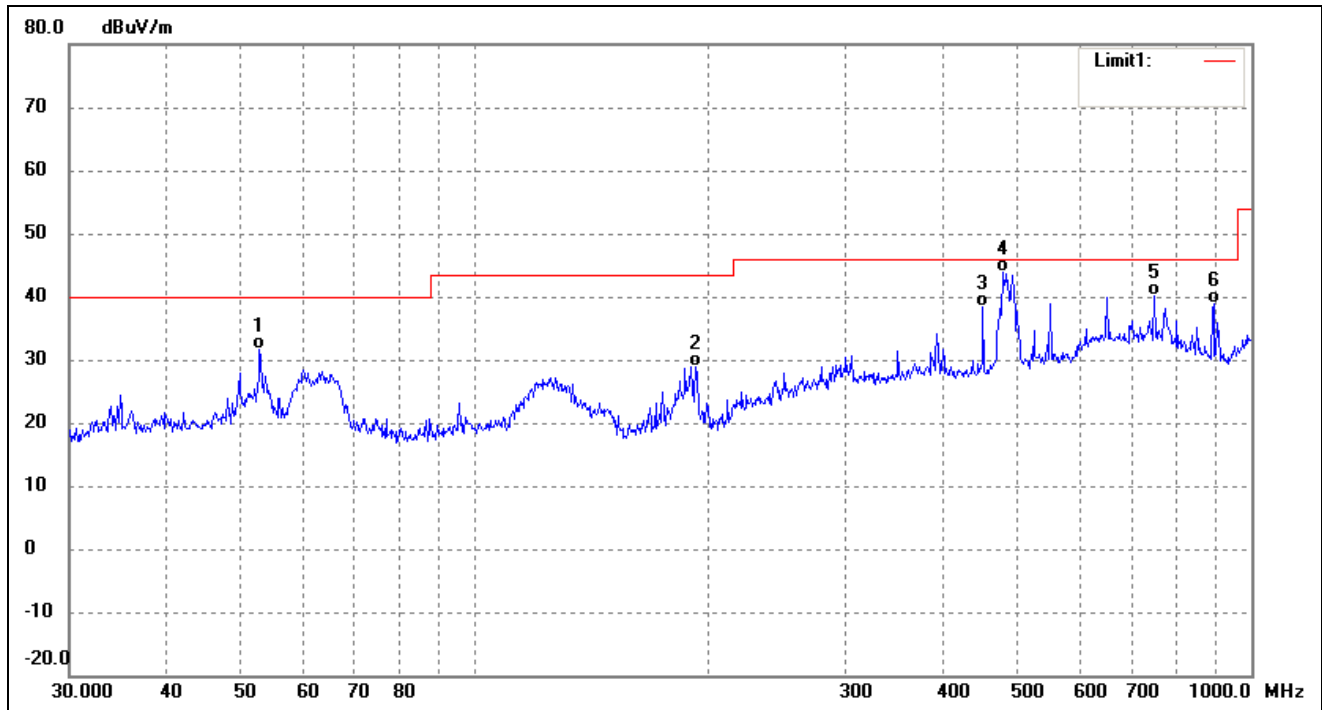
EUT: Tablet PC
Tested Model: F-10XIPS
Operating Condition: TM4
Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	192.4186	25.91	3.01	28.92	43.50	-14.58	90	100	QP
2	451.1350	25.51	12.79	38.30	46.00	-7.70	185	100	QP
3	478.8456	31.20	12.59	43.79	46.00	-2.21	112	100	QP
4	550.9480	25.06	13.93	38.99	46.00	-7.01	97	100	QP
5	651.9417	22.19	17.77	39.96	46.00	-6.04	124	100	QP
6	750.1083	21.50	18.58	40.08	46.00	-5.92	308	100	QP

Test Specification: Vertical

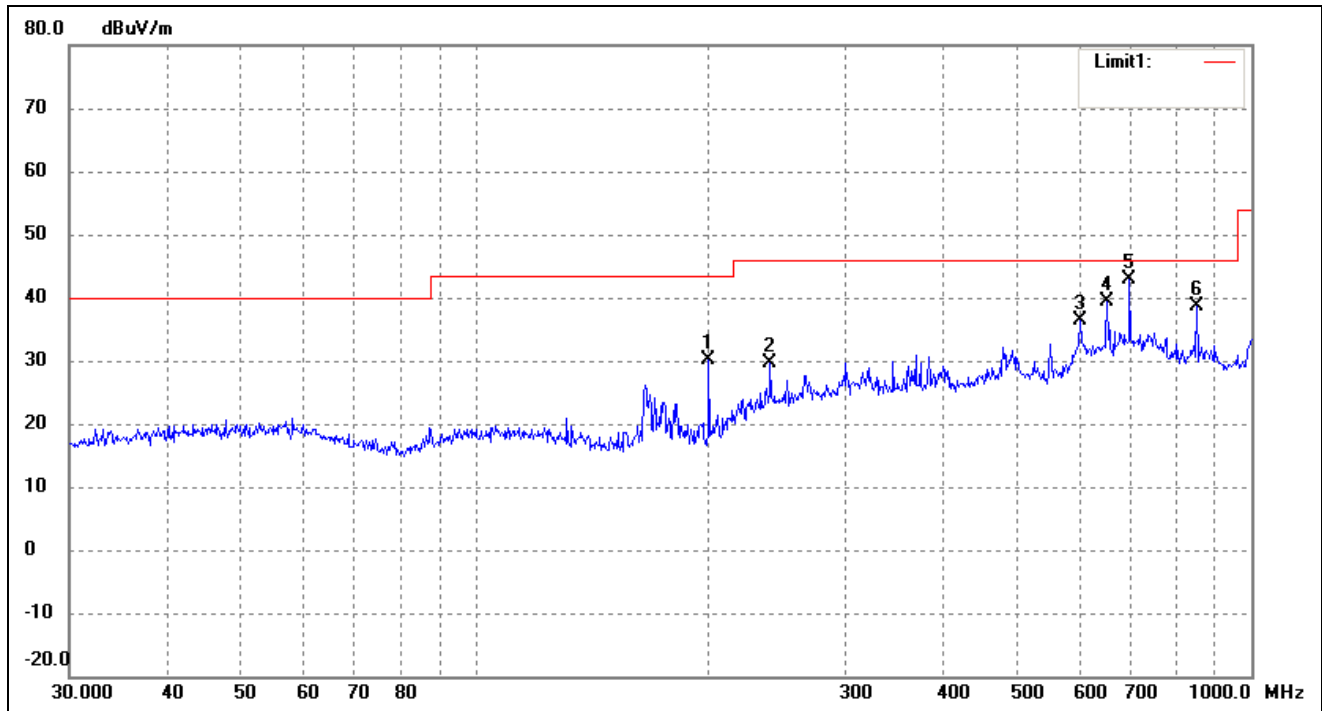


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	52.7600	26.47	5.06	31.53	40.00	-8.47	135	100	QP
2	192.4186	25.91	3.01	28.92	43.50	-14.58	315	100	QP
3	451.1350	25.51	12.79	38.30	46.00	-7.70	243	100	QP
4	478.8456	31.33	12.59	43.92	46.00	-2.08	72	100	QP
5	750.1083	21.50	18.58	40.08	46.00	-5.92	174	100	QP
6	893.8567	23.39	15.55	38.94	46.00	-7.06	273	100	QP

Plot of Radiated Emissions Test Data

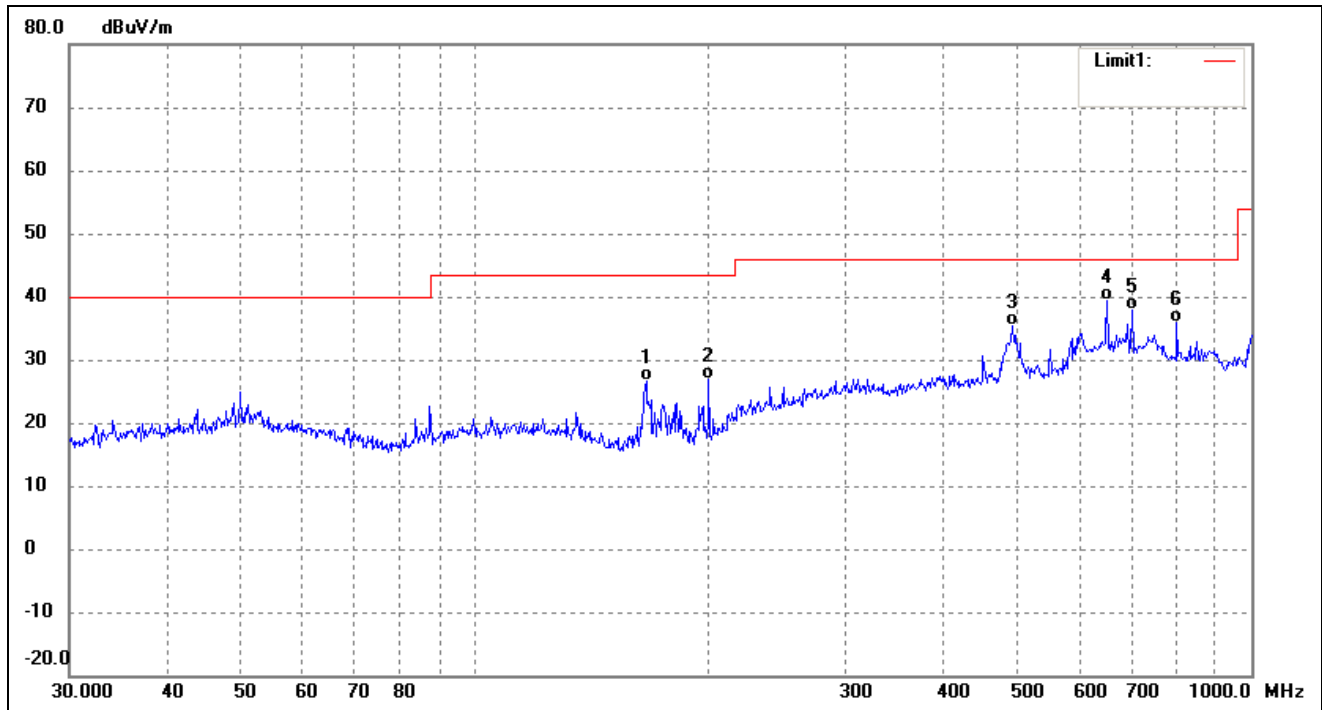
EUT: Tablet PC
Tested Model: F-10XIPS
Operating Condition: TM5
Comment: AC 120V/60Hz; USB 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	199.9856	26.77	3.36	30.13	43.50	-13.37	192	100	QP
2	239.9874	20.64	8.93	29.57	46.00	-16.43	237	100	QP
3	601.4265	17.66	18.66	36.32	46.00	-9.68	295	100	QP
4	651.9417	21.72	17.77	39.49	46.00	-6.51	70	100	QP
5	696.8567	25.33	17.43	42.76	46.00	-3.24	174	100	QP
6	851.0353	22.70	15.83	38.53	46.00	-7.47	135	100	QP

Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	166.0680	24.23	2.45	26.68	43.50	-16.82	111	100	QP
2	199.9856	23.43	3.36	26.79	43.50	-16.71	315	100	QP
3	492.4685	22.22	13.04	35.26	46.00	-10.74	132	100	QP
4	651.9417	21.59	17.77	39.36	46.00	-6.64	72	100	QP
5	701.7610	20.74	17.24	37.98	46.00	-8.02	133	100	QP
6	801.7863	19.50	16.26	35.76	46.00	-10.24	235	100	QP

Note: Testing is carried out with frequency rang 9kHz to the 12.75GHz, which above 1GHz are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

The measurements greater than 20dB below the limit from 9kHz to 30MHz.

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