

FCC Part 15B

Measurement and Test Report

For

Amelia World Corporation

11601 Biscayne Blvd Unit 200A, Miami, Florida USA

FCC ID: ZNY-LINSAY

FCC Rules: FCC Part 15B

Product Description: Tablet PC

Tested Model: COSMOS F-10HD

Report No.: STR12048090I-2

Tested Date: 2012-04-11 to 2012-05-14

Issued Date: 2012-05-14

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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 SEM.Test Compliance Service Co., Ltd

TABLE OF CONTENTS

1. GENERAL INFORMATION.....	3
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT).....	3
1.2 TEST STANDARDS.....	4
1.3 TEST METHODOLOGY.....	4
1.4 TEST FACILITY.....	4
1.5 EUT SETUP AND OPERATION MODE.....	5
2. SUMMARY OF TEST RESULTS	6
3. §15.107 (A) CONDUCTED EMISSIONS.....	7
3.1 MEASUREMENT UNCERTAINTY.....	7
3.2 TEST EQUIPMENT LIST AND DETAILS.....	7
3.3 TEST PROCEDURE.....	7
3.4 BASIC TEST SETUP BLOCK DIAGRAM.....	7
3.5 ENVIRONMENTAL CONDITIONS.....	8
3.6 SUMMARY OF TEST RESULTS/PLOTS.....	8
3.7 CONDUCTED EMISSIONS TEST DATA.....	8
4. §15.109(A) RADIATED EMISSION.....	11
4.1 MEASUREMENT UNCERTAINTY.....	11
4.2 TEST EQUIPMENT LIST AND DETAILS.....	11
4.3 TEST PROCEDURE.....	11
4.4 TEST RECEIVER SETUP.....	12
4.5 CORRECTED AMPLITUDE & MARGIN CALCULATION.....	12
4.6 ENVIRONMENTAL CONDITIONS.....	12
4.7 SUMMARY OF TEST RESULTS/PLOTS.....	12

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: Amelia World Corporation
Address of applicant: 11601 Biscayne Blvd Unit 200A, Miami, Florida USA

Manufacturer: EKEN (HK) Electronics Co., LTD
Address of manufacturer: Building 2F-2B Huafeng Science Park, Gonghe Road, Xixiang, Baoan District, Shenzhen, China

General Description of EUT	
Product Name:	Tablet PC
Trade Name:	LINSAY
Model No.:	COSMOS F-10HD
Adding Model(s):	COSMOS F-7HD
<i>Note: The test data is gathered from a production sample, provided by the manufacturer. The other model listed in the report has different appearance only of COSMOS F-10HD without circuit and electronic construction changed, declared by the manufacturer</i>	

Technical Characteristics of EUT	
Rated Voltage:	DC 3.7V
Rated Current:	/
Rated Power:	/
Power Adapter Model:	K-A70502000U (Input: AC 100-240V, Output: DC 5V)
Highest Internal Frequency:	1GHz (CPU)
Lowest Internal Frequency :	32.768 kHz (Crystal Y2)
Classification of ITE:	Class B

1.2 Test Standards

The following report is prepared on behalf of the Amelia World Corporation 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 C63.4-2003, 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.: 994117**

SEM.Test Compliance Services 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 994117.

- **Industry Canada (IC) Registration No.: 7673A**

The 3m Semi-anechoic chamber of SEM.Test Compliance Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 7673A.

- **CNAS Registration No.: L4062**

Shenzhen SEM.Test Electronics Service 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 3/F, Jinbao Commerce Building, Xin'an Fanshen 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	Playing	Color Bar with 1kHz Audio
TM2	Downloading	Test Software: CT3

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
DC Power Cable	1.5	Unshielded	Without Core
USB Cable	0.8	Shielded	With Core

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
Notebook	SAMSUNG	NP-R20	124V93FP300082V

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
Earphone Cable	1.0	Shielded	Without Core

2. SUMMARY OF TEST RESULTS

Description of Test	Result
§15.107 (a) Conducted Emission	Compliant
§15.109(a) Radiated Emission	Compliant

3. §15.107 (a) CONDUCTED EMISSIONS

3.1 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement is ± 2.88 dB.

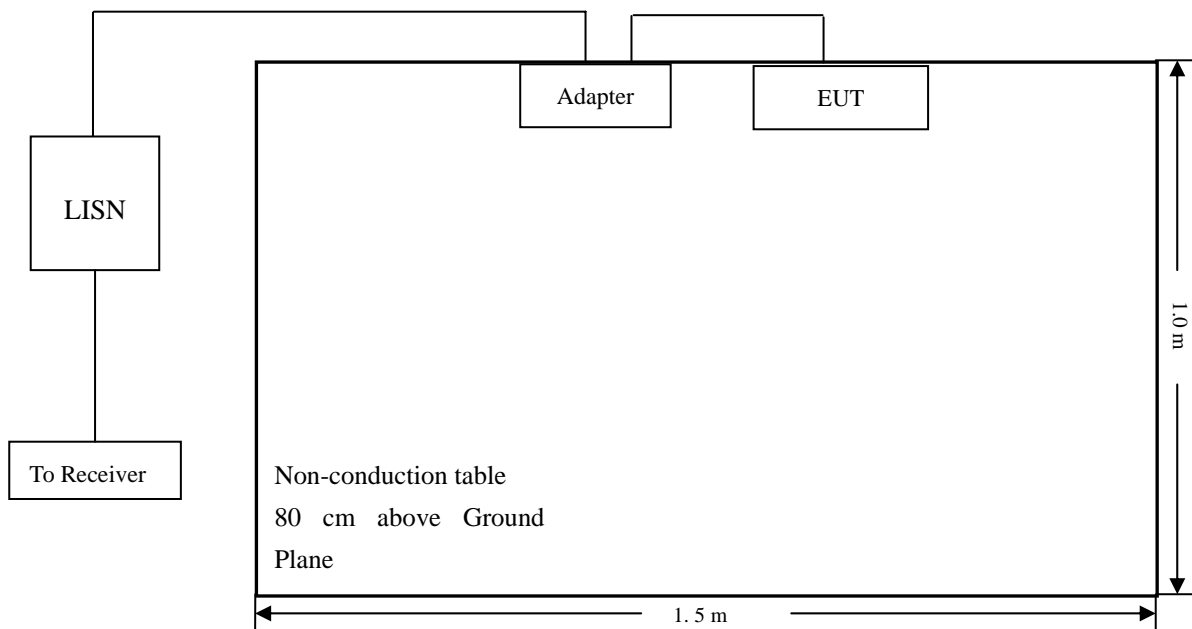
3.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2012-03-28	2013-03-27
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2012-03-28	2013-03-27
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2012-03-28	2013-03-27

3.3 Test Procedure

Test is conducting under the description of ANSI C63.4-2003, 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.

3.4 Basic Test Setup Block Diagram



3.5 Environmental Conditions

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

3.6 Summary of Test Results/Plots

According to the data in section 3.7, the EUT complied with the FCC Part 15.107 Conducted margin for a Class B device, with the *worst* margin reading of:

-1.15 dB μ V at 0.514 MHz in the Line, Peak detector, 0.15-30MHz

3.7 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

Conducted Disturbance

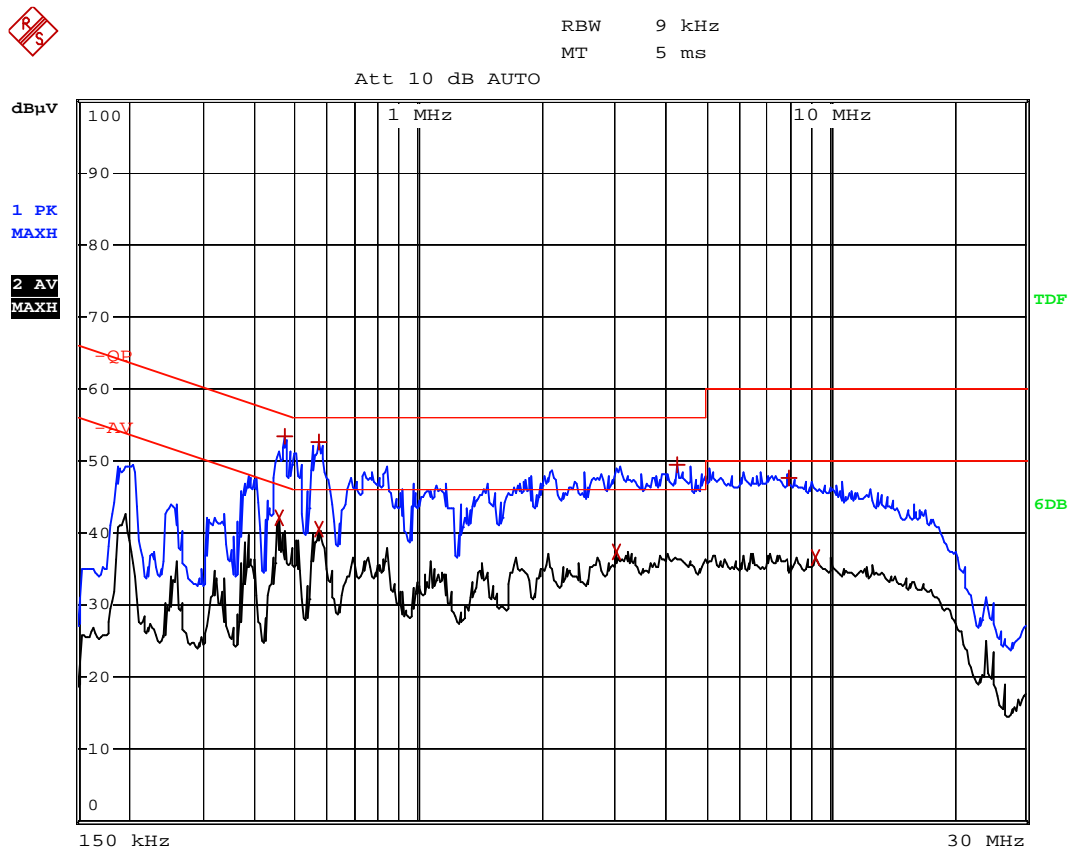
EUT: Tablet PC

M/N: COSMOS F-10HD

Operating Condition: Playing

Test Specification: N

Comment: AC 120V/60Hz



EDIT PEAK LIST (Prescan Results)

Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
2 Average	458 kHz	42.19	-4.52
1 Max Peak	474 kHz	53.54	-2.90
2 Average	570 kHz	40.50	-5.49
1 Max Peak	574 kHz	52.63	-3.36
2 Average	3.034 MHz	37.41	-8.58
1 Max Peak	4.282 MHz	49.49	-6.50
1 Max Peak	8.01 MHz	47.54	-12.45
2 Average	9.242 MHz	36.71	-13.28

Plot of Conducted Emissions Test Data

Conducted Disturbance

EUT: Tablet PC

M/N: COSMOS F-10HD

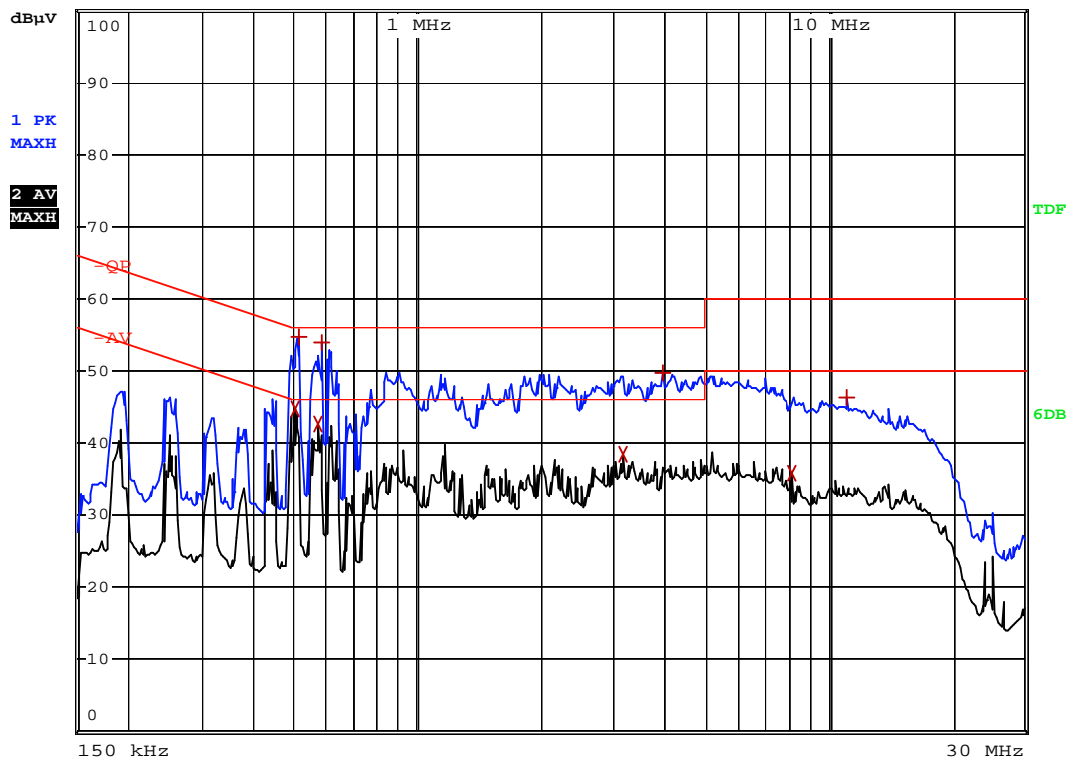
Operating Condition: Playing

Test Specification: L

Comment: AC 120V/60Hz


RBW 9 kHz
MT 5 ms

Att 10 dB AUTO



EDIT PEAK LIST (Prescan Results)

Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
2 Average	502 kHz	44.72	-1.27
1 Max Peak	514 kHz	54.84	-1.15
2 Average	574 kHz	42.58	-3.41
1 Max Peak	582 kHz	53.89	-2.10
2 Average	3.17 MHz	38.46	-7.53
1 Max Peak	3.958 MHz	49.65	-6.34
2 Average	8.142 MHz	35.90	-14.09
1 Max Peak	11.102 MHz	46.38	-13.61

4. §15.109(a) RADIATED EMISSION

4.1 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

4.2 Test Equipment List and Details

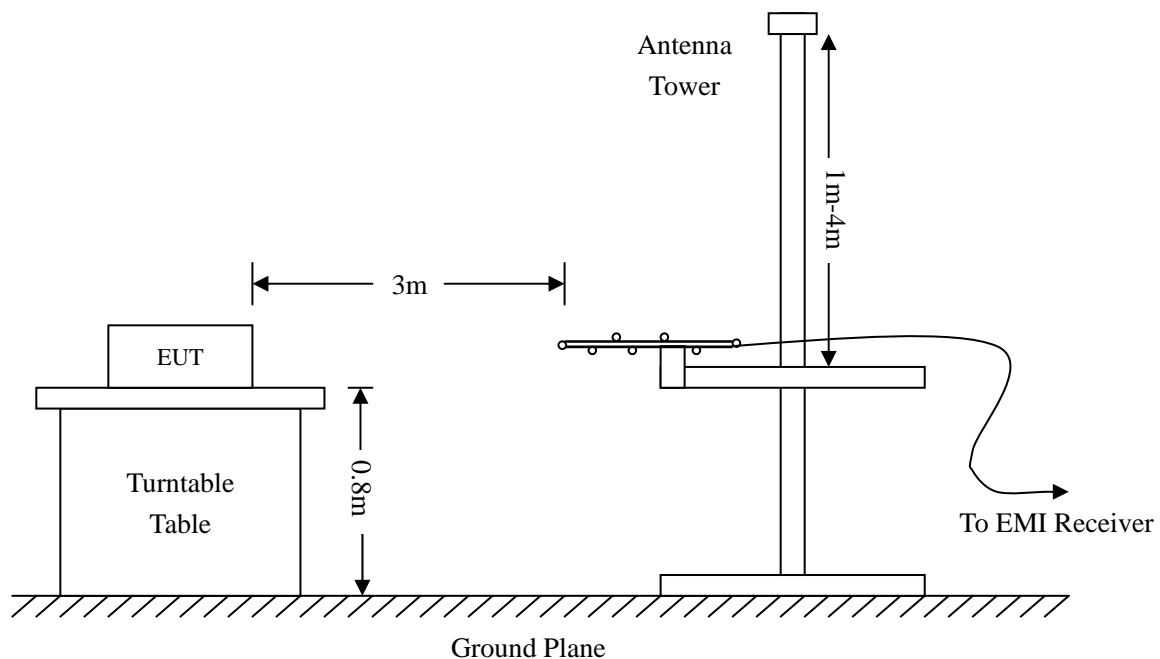
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2012-03-28	2013-03-27
EMI Test Receiver	R&S	ESVB	825471/005	2012-03-28	2013-03-27
Pre-amplifier	Agilent	8447F	3113A06717	2012-03-28	2013-03-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2012-03-28	2013-03-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2012-02-25	2013-02-24
Horn Antenna	ETS	3117	00086197	2012-02-25	2013-02-24
Horn Antenna	ETS	3116B	00088203	2012-02-25	2013-02-24
Loop Antenna	SCHWARZECK	HFRA 5165	9365	2012-02-25	2013-02-24

4.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2003 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.



4.4 Test Receiver Setup

During the radiated emission test for above 1GHz, the test receiver was set with the following configurations:

For peak detector:

RBW = 1000kHz, VBW = 3000kHz, Sweep Time = Auto

For average detector:

RBW = 1000kHz, VBW = 10Hz, Sweep Time = Auto

4.5 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 -6dBμV means the emission is 6dBμV below the maximum limit for Class B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15B Limit}$$

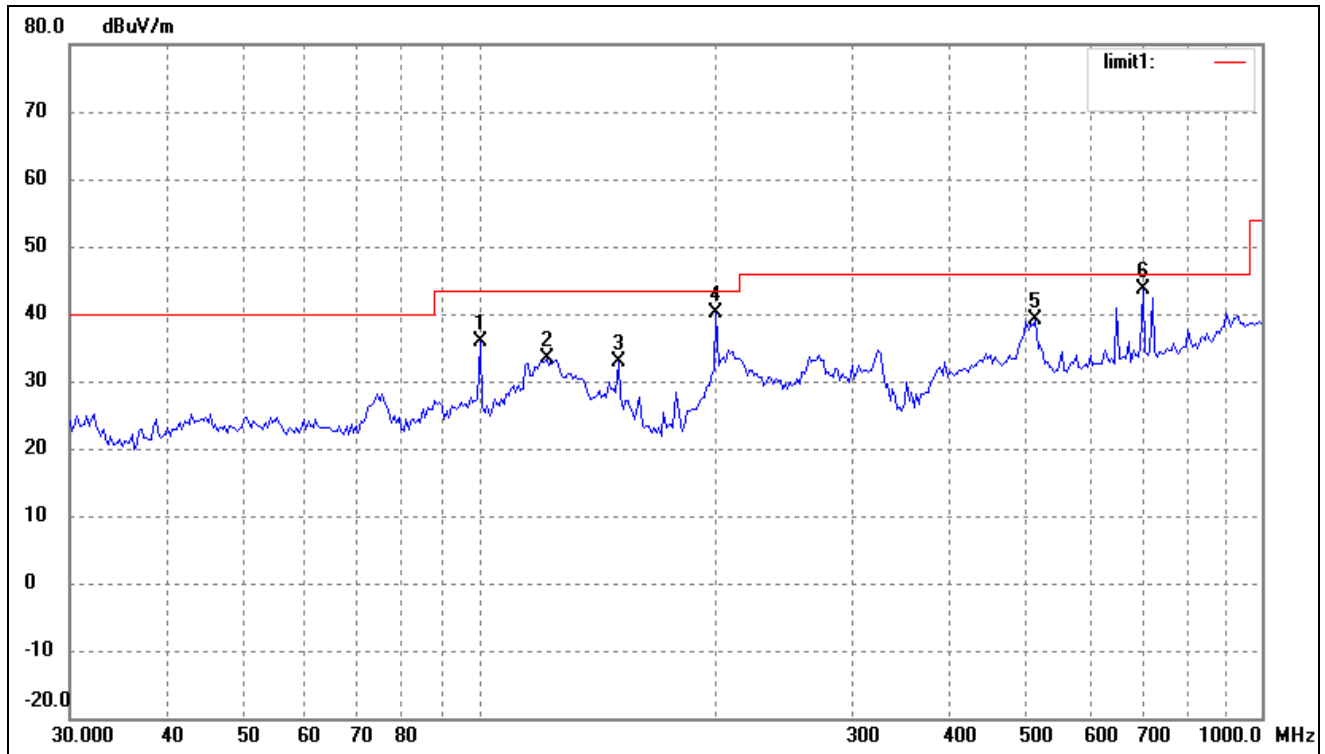
4.6 Environmental Conditions

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

4.7 Summary of Test Results/Plots

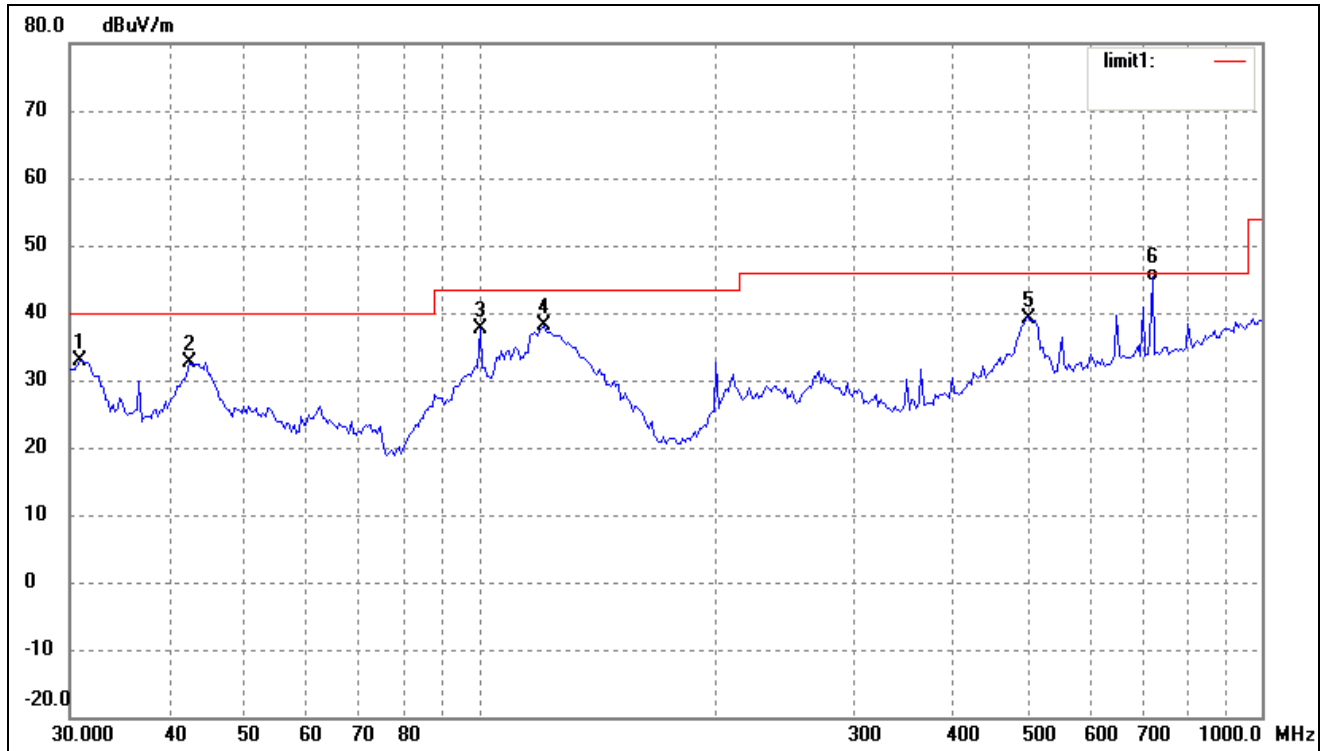
According to the data, the EUT complied with the FCC 15B Class B standards, and had the worst margin of:

-1.28 dBμV at 724.2611 MHz in the Horizontal polarization, Downloading mode, 9 kHz to 6 GHz, 3Meters

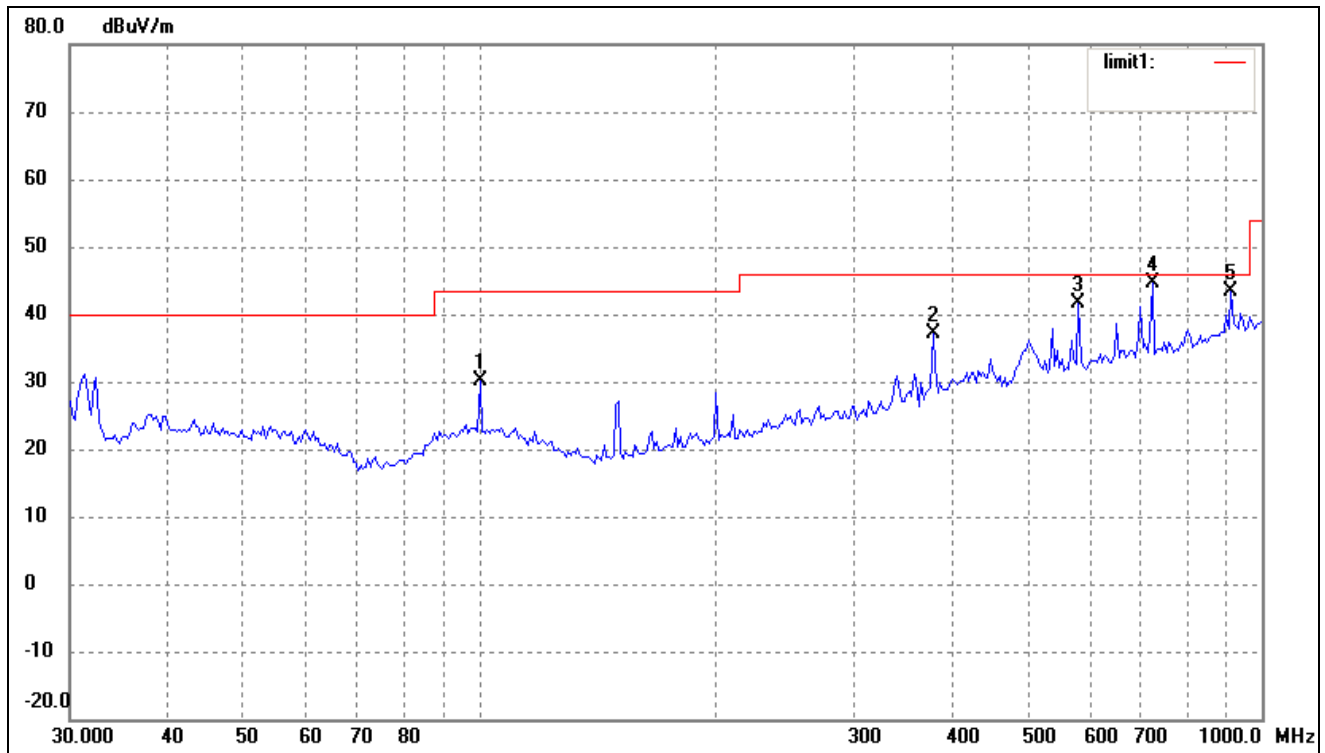
Plot of Radiation Emissions Test From 30MHz to 1GHz*Radiated Disturbance**EUT: Tablet PC**M/N: COSMOS F-10HD**Operating Condition: Playing**Test Specification: Horizontal & Vertical**Comment: AC 120V/60Hz, Adapter 5V**Horizontal*

No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	100.2286	27.55	8.41	35.96	43.50	-7.54	359	200	peak
2	121.9755	27.66	5.68	33.34	43.50	-10.16	359	200	peak
3	150.5378	28.73	4.10	32.83	43.50	-10.67	359	200	peak
4	200.6881	33.63	6.60	40.23	43.50	-3.27	359	200	peak
5	513.6331	24.47	14.72	39.19	46.00	-6.81	359	200	peak
6	704.2261	26.03	17.56	43.59	46.00	-2.41	359	200	peak

Vertical

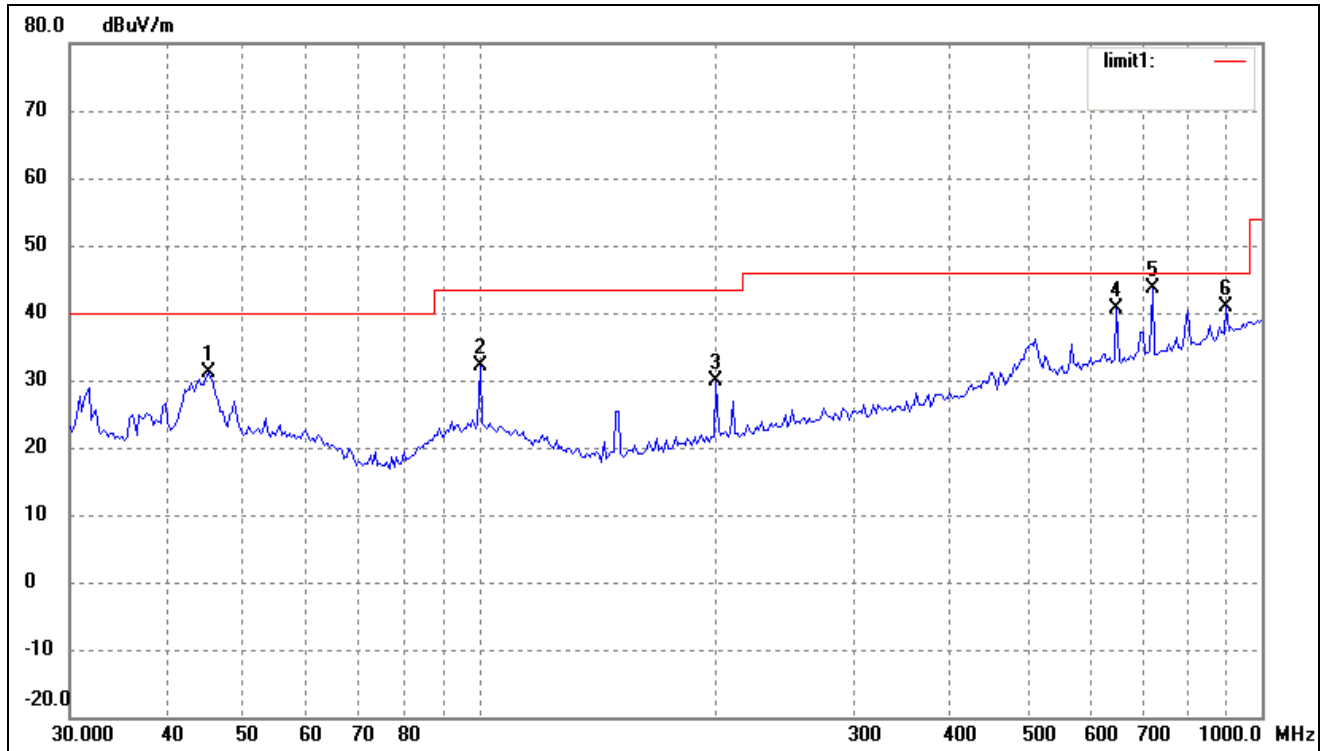


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	30.8535	26.17	6.77	32.94	40.00	-7.06	359	200	peak
2	42.6000	24.39	8.19	32.58	40.00	-7.42	359	100	peak
3	100.2286	29.18	8.41	37.59	43.50	-5.91	359	100	peak
4	121.1231	32.32	5.79	38.11	43.50	-5.39	359	100	peak
5	502.9395	24.78	14.47	39.25	46.00	-6.75	359	100	peak
6	724.2611	26.84	17.86	44.70	46.00	-1.30	359	100	QP

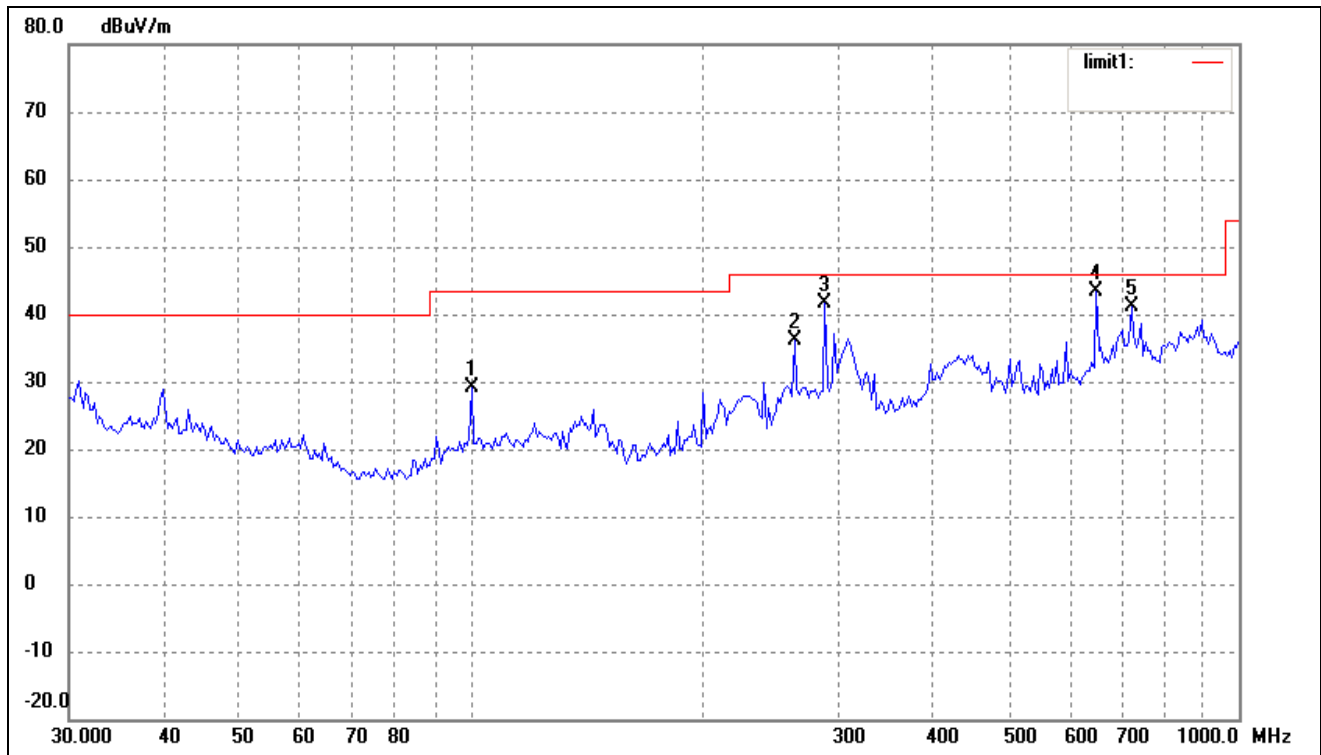
*Radiated Disturbance**EUT: Tablet PC**M/N: COSMOS F-10HD**Operating Condition: Downloading**Test Specification: Horizontal & Vertical**Comment: AC120V/60Hz; Connect to PC, USB 5V**Horizontal*

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	100.2286	21.79	8.41	30.20	43.50	-13.30	46	150	QP
2	379.9141	25.83	11.20	37.03	46.00	-8.97	315	100	peak
3	582.7425	25.23	16.28	41.51	46.00	-4.49	149	100	peak
4	724.2611	26.86	17.86	44.72	46.00	-1.28	58	100	peak
5	912.8620	22.19	21.14	43.33	46.00	-2.67	31	100	peak

Vertical

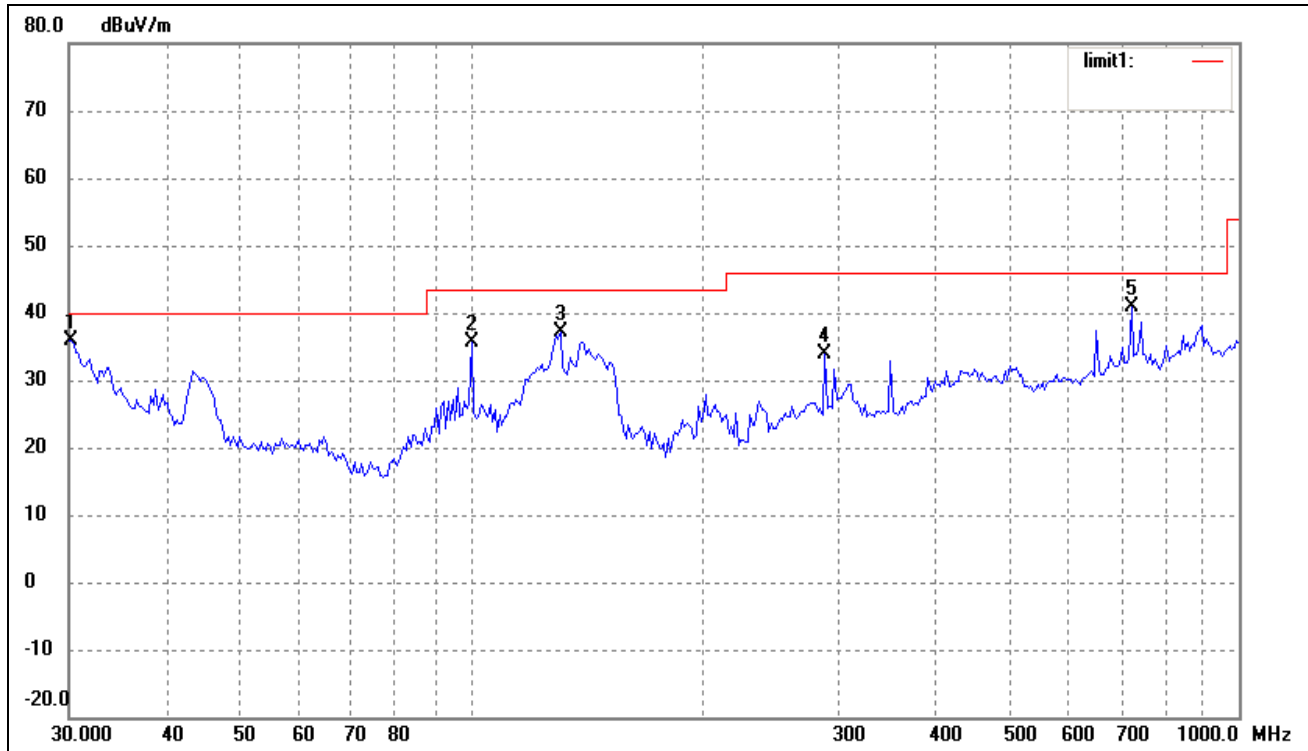


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	45.0583	22.78	8.23	31.01	40.00	-8.99	70	130	QP
2	100.2286	23.83	8.41	32.24	43.50	-11.26	26	100	peak
3	200.6881	23.27	6.60	29.87	43.50	-13.63	31	100	peak
4	651.9417	23.48	17.11	40.59	46.00	-5.41	97	160	QP
5	724.2611	25.78	17.86	43.64	46.00	-2.36	359	100	pak
6	900.1474	19.96	20.90	40.86	46.00	-5.14	359	100	peak

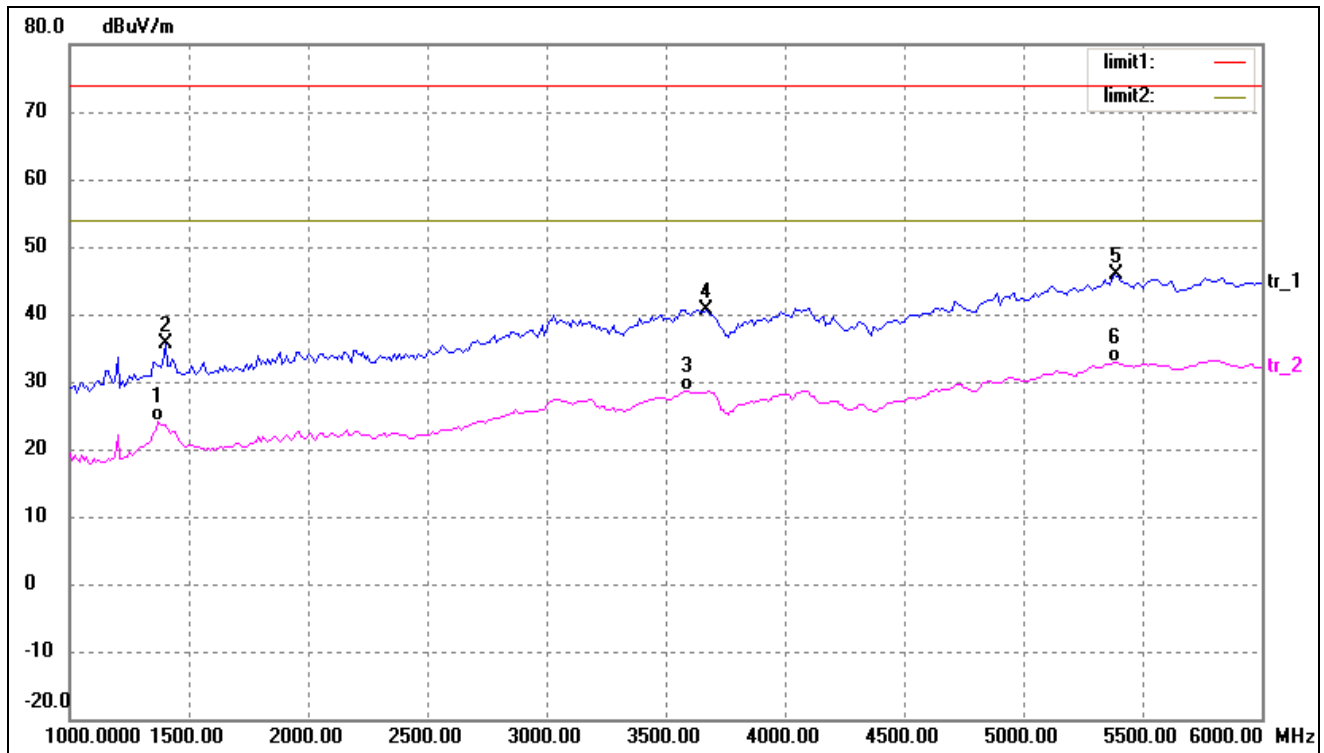
*Radiated Disturbance**EUT: Tablet PC**M/N: COSMOS F-10HD**Operating Condition: HDMI Out**Test Specification: Horizontal & Vertical**Comment: AC120V/60Hz;**Horizontal*

No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	100.2286	22.37	6.81	29.18	43.50	-14.32	359	200	peak
2	263.8190	28.22	8.00	36.22	46.00	-9.78	359	200	peak
3	289.0021	31.85	9.67	41.52	46.00	-4.48	359	200	peak
4	651.9417	28.22	15.07	43.29	46.00	-2.71	359	200	peak
5	724.2611	24.15	16.93	41.08	46.00	-4.92	359	200	peak

Vertical

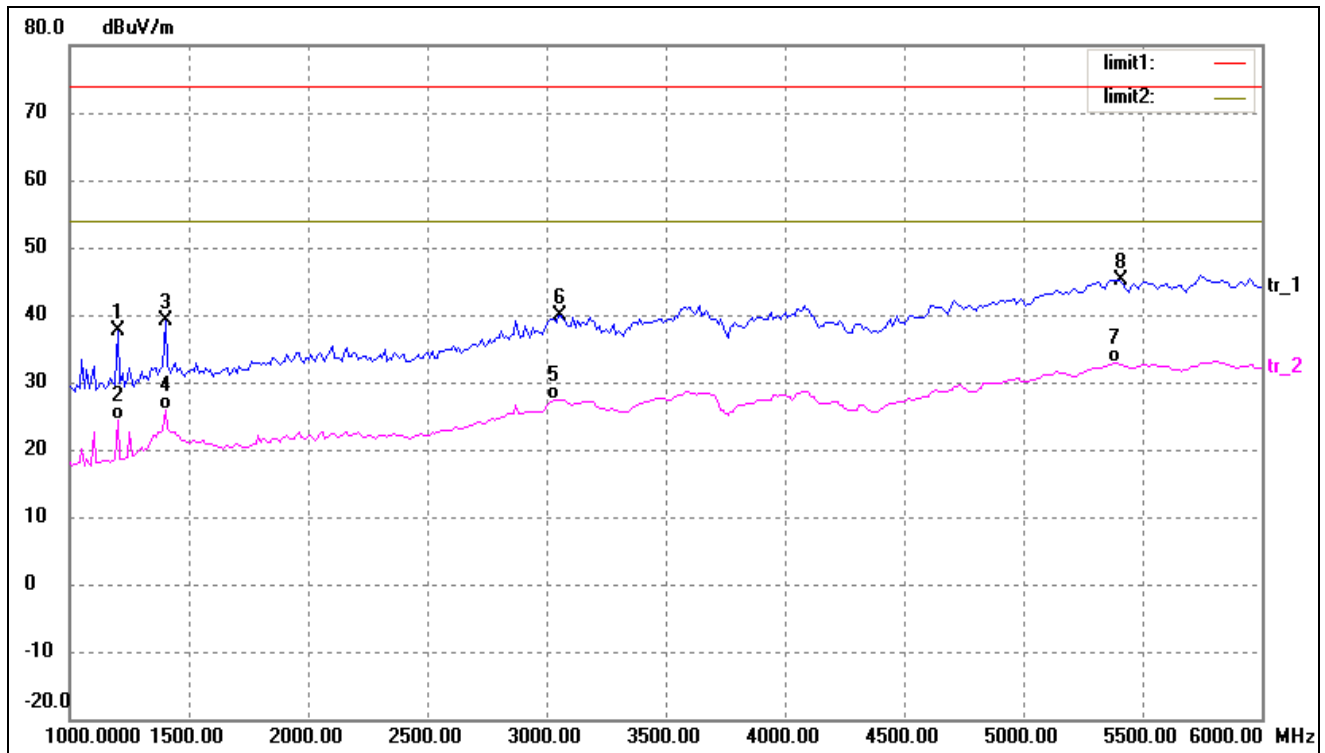


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	30.2111	27.81	8.07	35.88	40.00	-4.12	359	100	peak
2	100.2286	28.78	6.81	35.59	43.50	-7.91	359	100	peak
3	130.8369	33.06	4.07	37.13	43.50	-6.37	359	100	peak
4	289.0021	24.12	9.67	33.79	46.00	-12.21	359	100	peak
5	724.2611	24.05	16.93	40.98	46.00	-5.02	359	100	peak

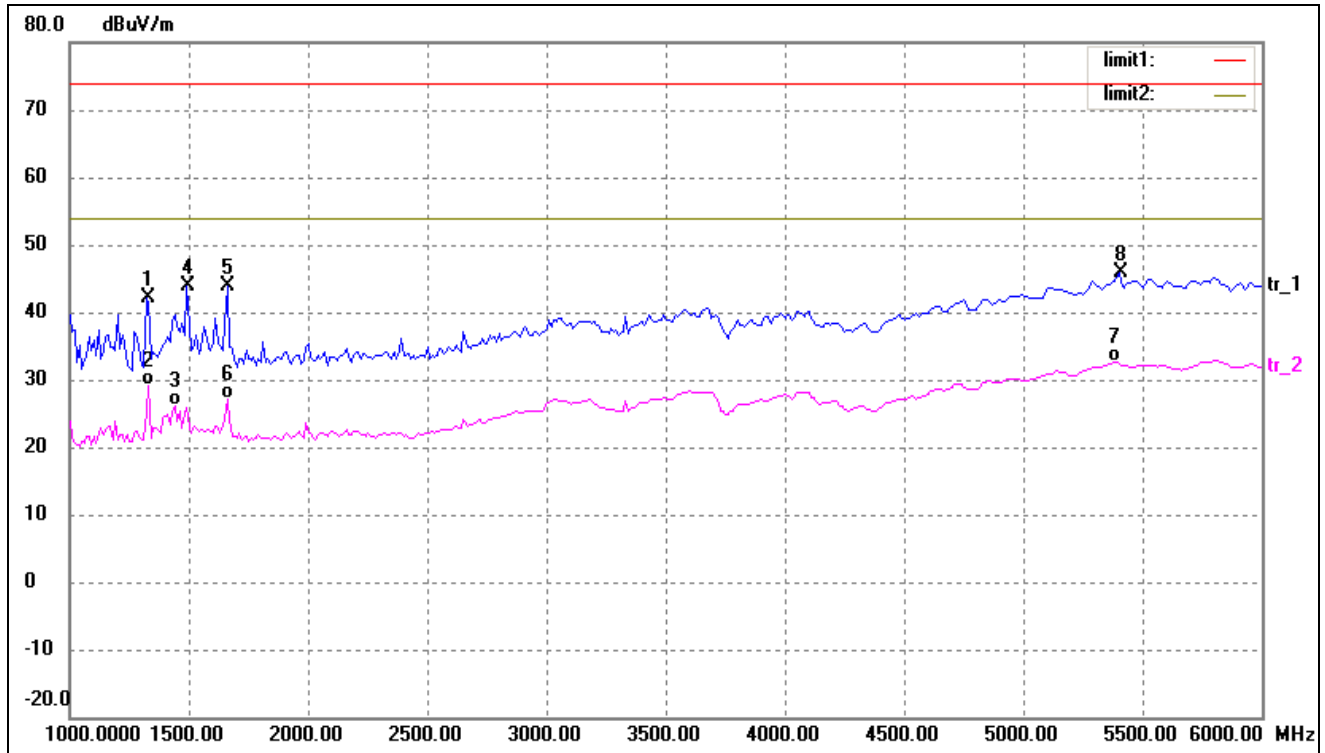
Radiated Disturbance Above 1GHz*EUT: Tablet PC**M/N: COSMOS F-10HD**Operating Condition: Playing**Test Specification: Horizontal & Vertical**Comment: AC 120V/60Hz, Adapter 5V, Above 1G**Horizontal*

No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	1375.659	39.19	-15.12	24.07	54.00	-29.93	359	200	AVG
2	1400.530	50.53	-15.00	35.53	74.00	-38.47	359	200	peak
3	3594.181	34.82	-6.22	28.60	54.00	-25.40	359	200	AVG
4	3672.297	46.60	-5.97	40.63	74.00	-33.37	359	200	peak
5	5388.429	47.90	-1.94	45.96	74.00	-28.04	359	200	peak
6	5388.429	34.84	-1.94	32.90	54.00	-21.10	359	200	AVG

Vertical

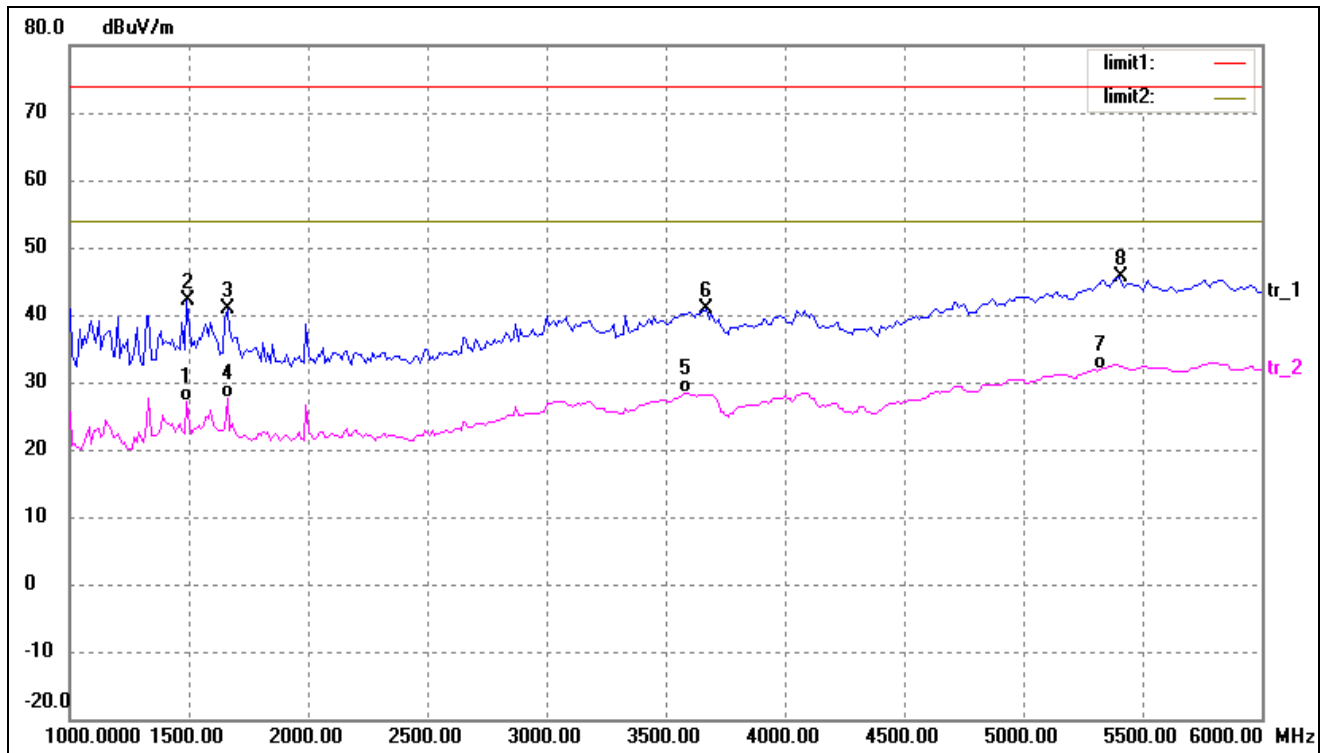


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	1200.526	53.63	-16.00	37.63	74.00	-36.37	359	100	peak
2	1200.526	40.36	-16.00	24.36	54.00	-29.64	359	100	AVG
3	1400.530	54.04	-15.00	39.04	74.00	-34.96	359	100	peak
4	1400.530	40.91	-15.00	25.91	54.00	-28.09	359	100	AVG
5	3037.063	35.10	-7.74	27.36	54.00	-26.64	359	100	AVG
6	3058.908	47.54	-7.68	39.86	74.00	-34.14	359	100	peak
7	5388.429	34.89	-1.94	32.95	54.00	-21.05	359	100	AVG
8	5407.773	47.00	-1.87	45.13	74.00	-28.87	359	100	peak

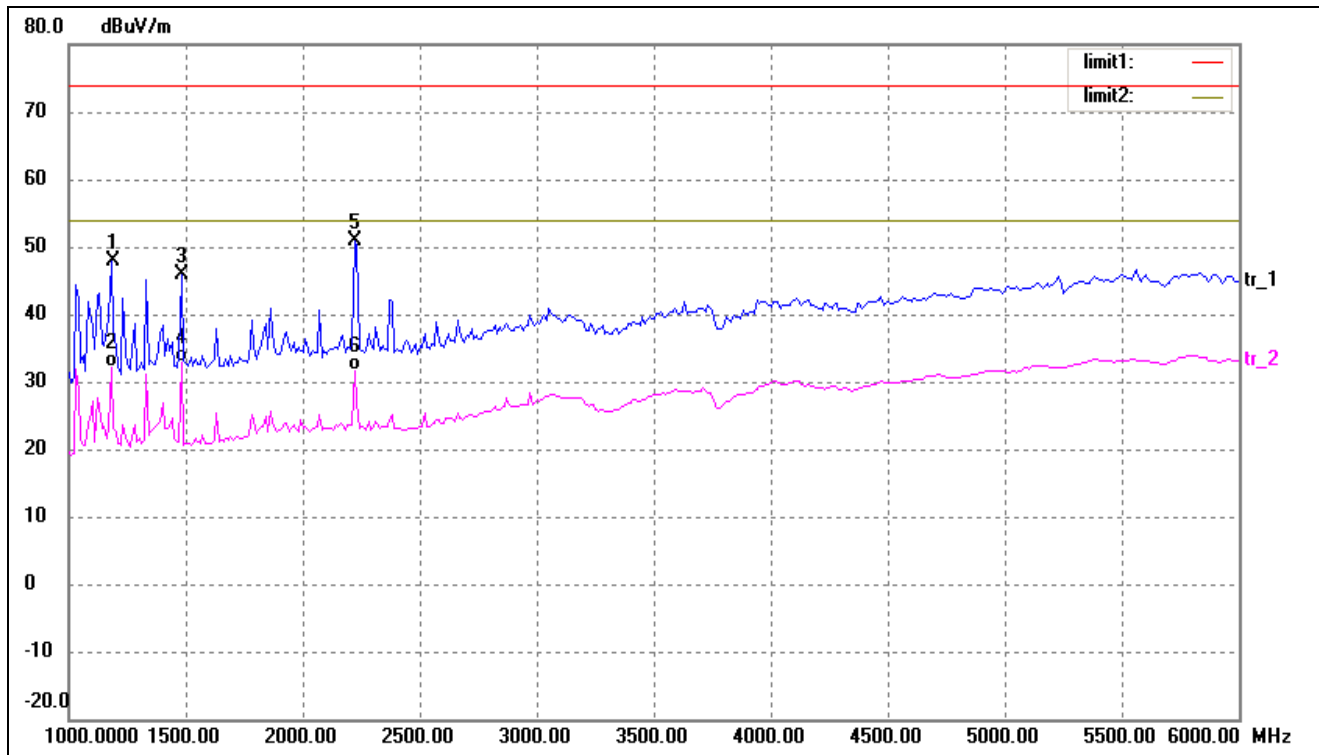
*Radiated Disturbance**EUT: Tablet PC**M/N: COSMOS F-10HD**Operating Condition: Downloading**Test Specification: Horizontal & Vertical**Comment: AC 120V/60Hz; Connect to PC, USB 5V, Above 1G**Horizontal*

No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	1327.235	57.54	-15.36	42.18	74.00	-31.82	359	200	peak
2	1332.000	44.44	-15.34	29.10	54.00	-24.90	359	200	AVG
3	1441.262	40.83	-14.79	26.04	54.00	-27.96	359	200	AVG
4	1499.209	58.44	-14.50	43.94	74.00	-30.06	359	200	peak
5	1663.393	57.41	-13.56	43.85	74.00	-30.15	359	200	peak
6	1663.393	40.71	-13.56	27.15	54.00	-26.85	359	200	AVG
7	5388.429	34.47	-1.94	32.53	54.00	-21.47	359	200	AVG
8	5407.773	47.63	-1.87	45.76	74.00	-28.24	359	200	peak

Vertical

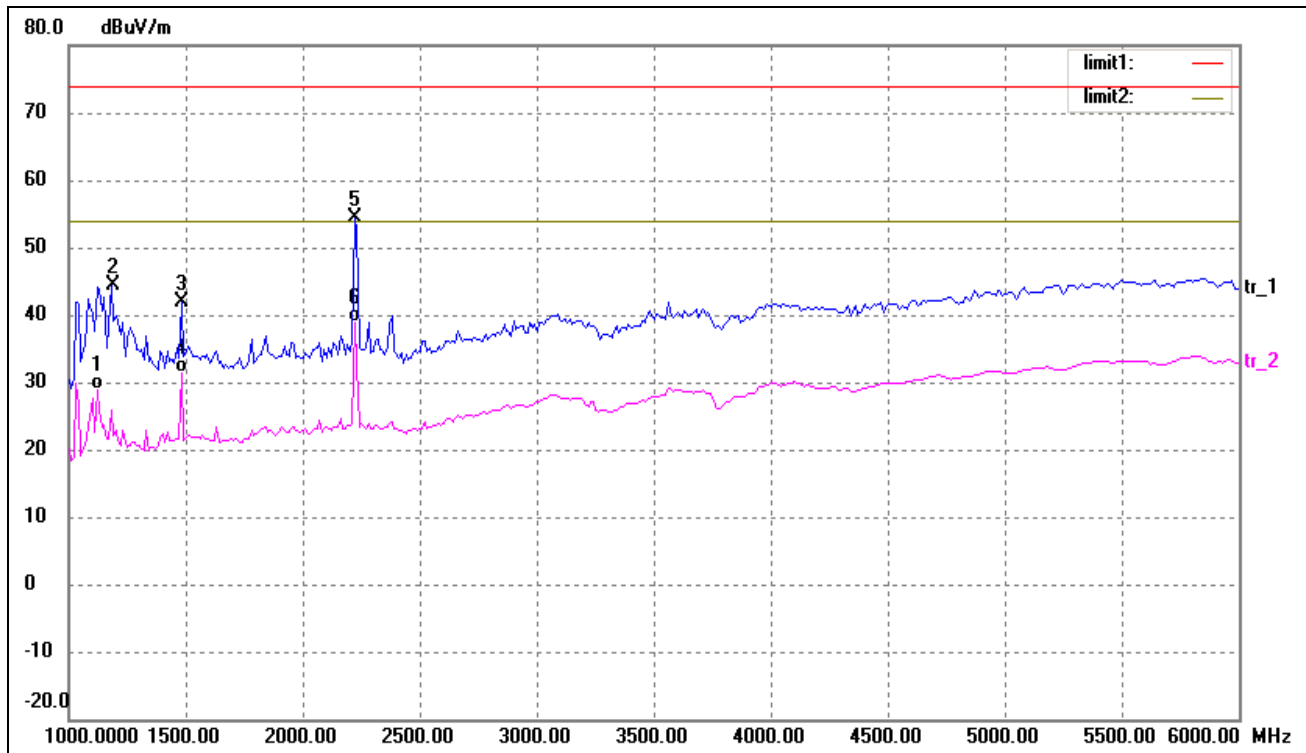


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	1493.846	41.59	-14.53	27.06	54.00	-26.94	359	100	AVG
2	1499.209	56.69	-14.50	42.19	74.00	-31.81	359	100	peak
3	1663.393	54.45	-13.56	40.89	74.00	-33.11	359	100	peak
4	1663.393	41.24	-13.56	27.68	54.00	-26.32	359	100	AVG
5	3581.325	34.65	-6.24	28.41	54.00	-25.59	359	100	AVG
6	3672.297	46.85	-5.97	40.88	74.00	-33.12	359	100	peak
7	5292.741	34.14	-2.29	31.85	54.00	-22.15	359	100	AVG
8	5407.773	47.40	-1.87	45.53	74.00	-28.47	359	100	peak

*Radiated Disturbance**EUT: Tablet PC**M/N: COSMOS F-10HD**Operating Condition: HDMI Out**Test Specification: Horizontal & Vertical**Comment: AC 120V/60Hz; Connect to PC, USB 5V, Above 1G**Horizontal*

No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	1187.688	63.98	-16.06	47.92	74.00	-26.08	359	200	peak
2	1187.688	48.15	-16.06	32.09	54.00	-21.91	359	200	AVG
3	1483.178	60.35	-14.59	45.76	74.00	-28.24	359	200	peak
4	1483.178	47.52	-14.59	32.93	54.00	-21.07	359	200	AVG
5	2223.594	62.54	-11.70	50.84	74.00	-23.16	359	200	peak
6	2223.594	43.41	-11.70	31.71	54.00	-22.29	359	200	AVG

Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	1121.506	45.38	-16.39	28.99	54.00	-25.01	359	100	AVG
2	1187.688	60.47	-16.06	44.41	74.00	-29.59	359	100	peak
3	1483.178	56.41	-14.59	41.82	74.00	-32.18	359	100	peak
4	1483.178	46.02	-14.59	31.43	54.00	-22.57	359	100	AVG
5	2223.594	66.19	-11.70	54.49	74.00	-19.51	359	100	peak
6	2223.594	50.60	-11.70	38.90	54.00	-15.10	359	100	AVG

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, which above 5th Harmonics 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 *****