FCC PART 15B

MEASUREMENT AND TEST REPORT

FOR

CHINALEAP (HK) TECHNOLOGY CO., LIMITED

Rm.504, Building B, Fu An Technology Mansion, No.1 High-tech South Road,

Science & Technology Park, Nanshan District, Shenzhen, China

FCC ID: YNBCL-AMRXXX

Report Concerns: Original Report	**Equipment Type:** Mobile Internet Terminal
Model:	ARMM1
Report No.:	STR10078191I
Test Date:	2010-07-24 to 2010-07-31
Issue Date:	2010-08-02
Test Engineer:	Jason Chen
Reviewed By:	Lahm Peng
Approved & Authorized By:	Jandy so/PSQ Manager
Prepared By:	**SEM.Test Compliance Service Co., Ltd** 3/F, Jinbao Commerce Building, Xin'an Fanshen Road, Bao'an District, Shenzhen, P.R.C.（518101） Tel.: +86-755-33663308 Fax.: +86-755-33663309 Website: www.semtest.com.cn

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

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	CHINALEAP （HK）TECHNOLOGY CO., LIMITED
Address of applicant:	Rm.504, Building B, Fu An Technology Mansion, NO.1 High-tech South Road, Science & Technology Park, Nanshan District, Shenzhen, China
Manufacturer:	CHINALEAP （HK）TECHNOLOGY CO., LIMITED
Address of manufacturer:	Rm.504, Building B, Fu An Technology Mansion, NO.1 High-tech South Road, Science & Technology Park, Nanshan District, Shenzhen, China

General Description of E.U.T

Items	Description
EUT Description:	Mobile Internet Terminal
Trade Name:	SW
Model No.:	ARMM1
Adding Model:	ARMF1X, ARMP1X, ARMMXX, ARMXXX
Rate Current:	DC 7.4V by battery, DC 9V by power adaptor
Rate Voltage:	2A
Size:	20.2 x12.2 x1.6 cm
For more information refer to the circuit diagram form and the user's manual.	

The test data is gathered from a production sample, provided by the manufacturer. Test is carried out with ARMM1 since the others listed in the report have the different appearances only without electronic construction changed, declared by the manufacturer.

1.2 Test Standards

The following report is prepared on behalf of the CHINALEAP (HK) TECHNOLOGY CO., LIMITED 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 15.107, and 15.109 rules.

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

1.3 Related Submittal(s)/Grant(s)

No Related Submittal(s).

1.4 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2009, 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.
The equipment under test (EUT) was configured to measure its highest possible susceptibility against the tested phenomena. The test modes were adapted accordingly in reference to the Operating Instructions.

1.5 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.

1.6 EUT Exercise Software

The EUT exercise program used during radiated and conducted testing was designed to exercise the system components. The test software, provided by the customer, is started while the EUT is on to simulate the normal work. under the Windows XP terminal.

1.7 Accessories Equipment List and Details

Description	Manufacturer	Model	Serial Number
Notebook PC	ASUA	X50R	74N0AS297138
Adapter	switching	FLD0710-9.0V2.0A	/

1.8 EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
DC Cable	1.2	Unshielded	Without Core
HDMI Cable	1.4	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 EMISSION

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.

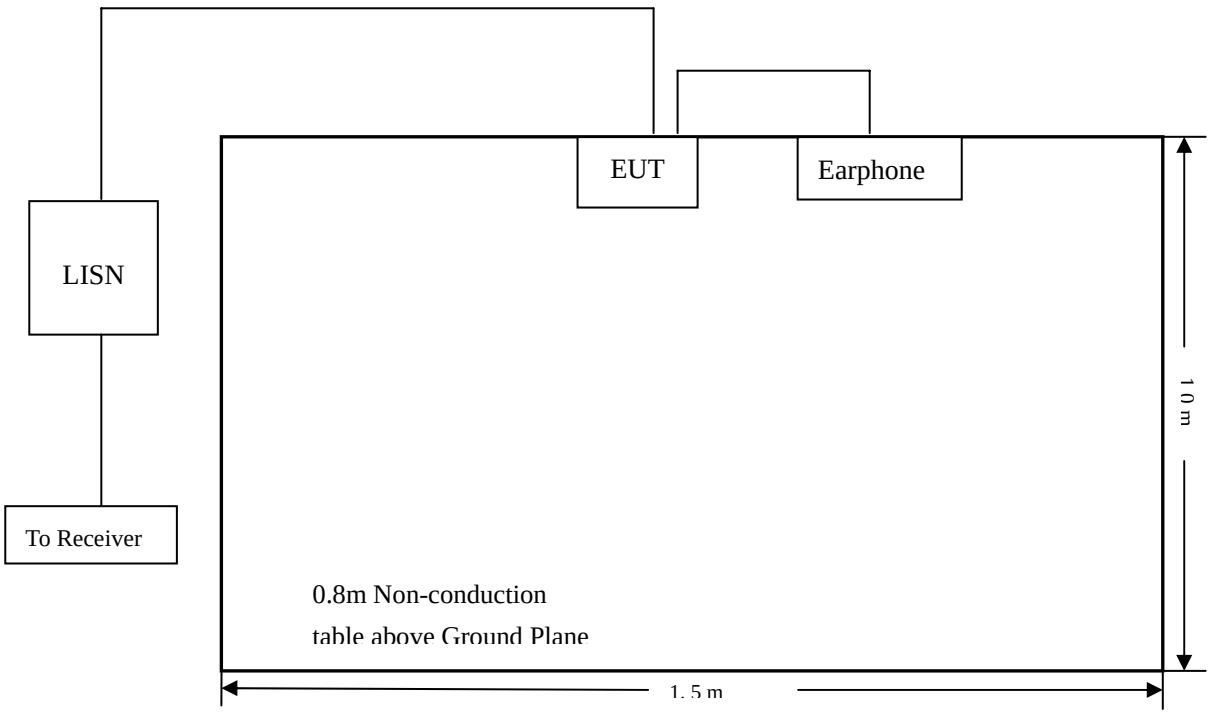
3.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2009-08-12	2010-08-11
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2009-08-12	2010-08-11
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2009-08-12	2010-08-11

3.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2009 measurement procedure. The specification used was with the FCC Part 15.107 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.

3.4 Basic Test Setup Block Diagram



3.5 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	52%
ATM Pressure:	1012 mbar

3.6 Test Receiver Setup

During the conducted emission test, the test receiver was set with the following configurations:

Start Frequency ..... 150 kHz
Stop Frequency..... 30 MHz
Sweep Speed ..... Auto
IF Bandwidth..... 10 kHz
Quasi-Peak Adapter Bandwidth ..... 9 kHz
Quasi-Peak Adapter Mode ..... Normal

3.7 Summary of Test Results/Plots

According to the data in section 3.8, the EUT complied with the FCC 15B Conducted margin for a Class B device, with the *worst* margin reading of:

-5.53 dBμV at **27.918 MHz** in the **Line** mode**, Ave** detector, **0.15-30MHz**

3.8 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

Conducted Disturbance

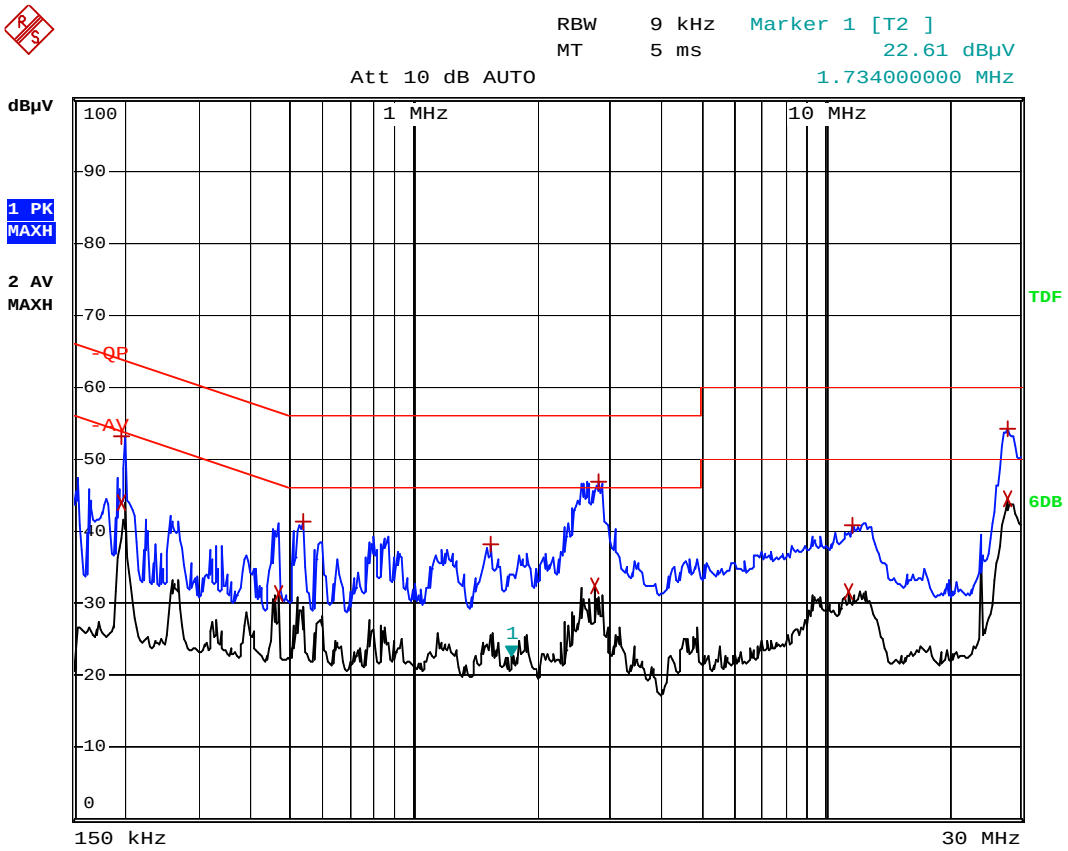
EUT: Mobile Internet Terminal

M/N: ARMM1

Operating Condition: Running with Program

Test Specification: N

Comment: AC 120V/60Hz



Date: 30.JUL.2010 22:22:32

EDIT PEAK LIST (Prescan Results)

Trace1:	-QP
Trace2:	-AV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	198 kHz	53.08	-10.60
2 Average	198 kHz	44.06	-9.62
2 Average	466 kHz	31.44	-15.14
1 Max Peak	538 kHz	41.37	-14.62
1 Max Peak	1.534 MHz	38.08	-17.91
2 Average	2.758 MHz	32.36	-13.63
1 Max Peak	2.83 MHz	46.96	-9.03
2 Average	11.486 MHz	31.64	-18.35
1 Max Peak	11.702 MHz	40.79	-19.20
1 Max Peak	27.786 MHz	54.29	-5.70
2 Average	27.918 MHz	44.46	-5.53

Date: 30.JUL.2010 22:22:43

Plot of Conducted Emissions Test Data

Conducted Disturbance

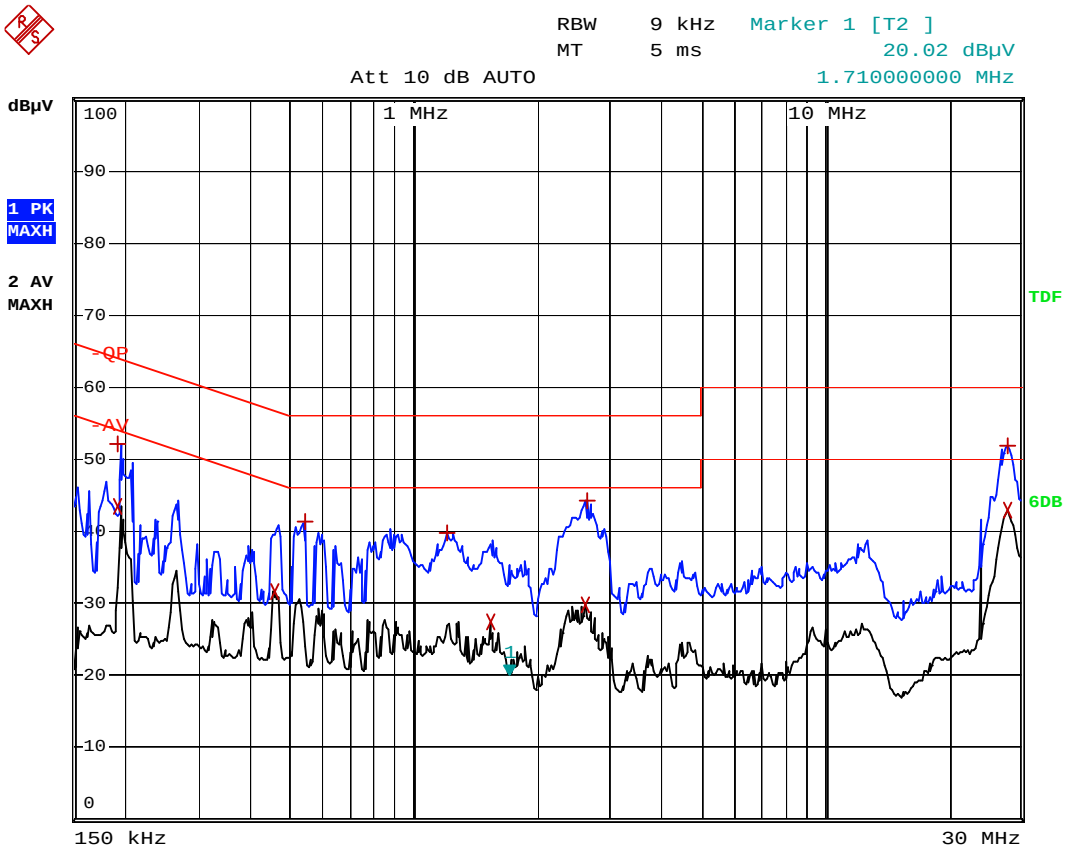
EUT: Mobile Internet Terminal

M/N: ARMM1

Operating Condition: Running with Program

Test Specification: L

Comment: AC 120V/60Hz



Date: 30.JUL.2010 22:24:07

EDIT PEAK LIST (Prescan Results)

Trace1:	-QP
Trace2:	-AV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	194 kHz	52.22	-11.63
2 Average	194 kHz	43.47	-10.39
2 Average	458 kHz	31.74	-14.98
1 Max Peak	542 kHz	41.45	-14.54
1 Max Peak	1.21 MHz	39.86	-16.13
2 Average	1.546 MHz	27.47	-18.52
2 Average	2.63 MHz	29.66	-16.33
1 Max Peak	2.654 MHz	44.12	-11.87
2 Average	27.874 MHz	42.86	-7.13
1 Max Peak	27.902 MHz	51.78	-8.21

Date: 30.JUL.2010 22:24:17

4. §15.109(a)- RADIATED EMISSION

4.1 Measurement Uncertainty

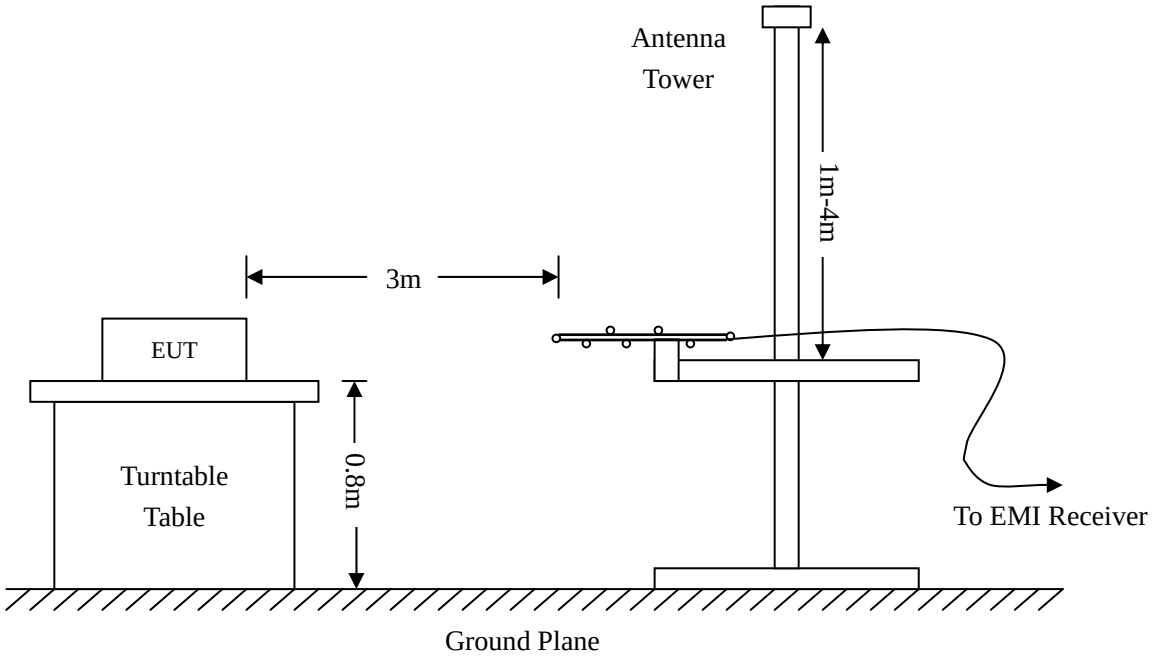
Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

4.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	ROHDE&SCHWARZ	FSEA20	DE25181	2009-08-12	2010-08-11
Positioning Controller	C&C	CC-C-1F	N/A	2009-08-12	2010-08-11
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2010-07-21	2011-07-20
Horn Antenna	ETS	3117	00086197	2010-07-21	2011-07-20
RF Switch	EM	EMSW18	SW060023	2009-08-12	2010-08-11
Amplifier	Agilent	8447F	3113A06717	2009-08-12	2010-08-11
Coaxial Cable	SCHWARZBECK	AK9513	9513-10	2009-08-12	2010-08-11
EMI Test Receiver	ROHDE&SCHWARZ	FSP	N/A	2010-04-16	2011-04-15

4.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2009 measurement procedure. The specification used was with the FCC Part 15.205 and 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 conducted emission test, the test receiver was set with the following configurations:

Start Frequency ..... 30 MHz
Stop Frequency..... 1000 MHz
Sweep Speed ..... Auto
IF Bandwidth..... 10 kHz
Quasi-Peak Adapter Bandwidth ..... 120 kHz
Quasi-Peak Adapter Mode ..... Normal

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:

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 Class B. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – FCC Part 15B Limit

4.6 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	54%
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:

-2.97 dBμV at **485.6093MHz** in the **Vertical** polarization, **Playing&Charging 30 MHz to 1 GHz, 3Meters**

-3.62 dBμV at **449.5557MHz** in the **Vertical** polarization, **Downloading 30 MHz to 1 GHz, 3Meters**

-1.87 dBμV at **165.4716MHz** in the **Horizontal** polarization, **HDMI OUT 30 MHz to 1 GHz, 3Meters**

Plot of Radiation Emissions Test Data

Radiated Disturbance

EUT: Mobile Internet Terminal

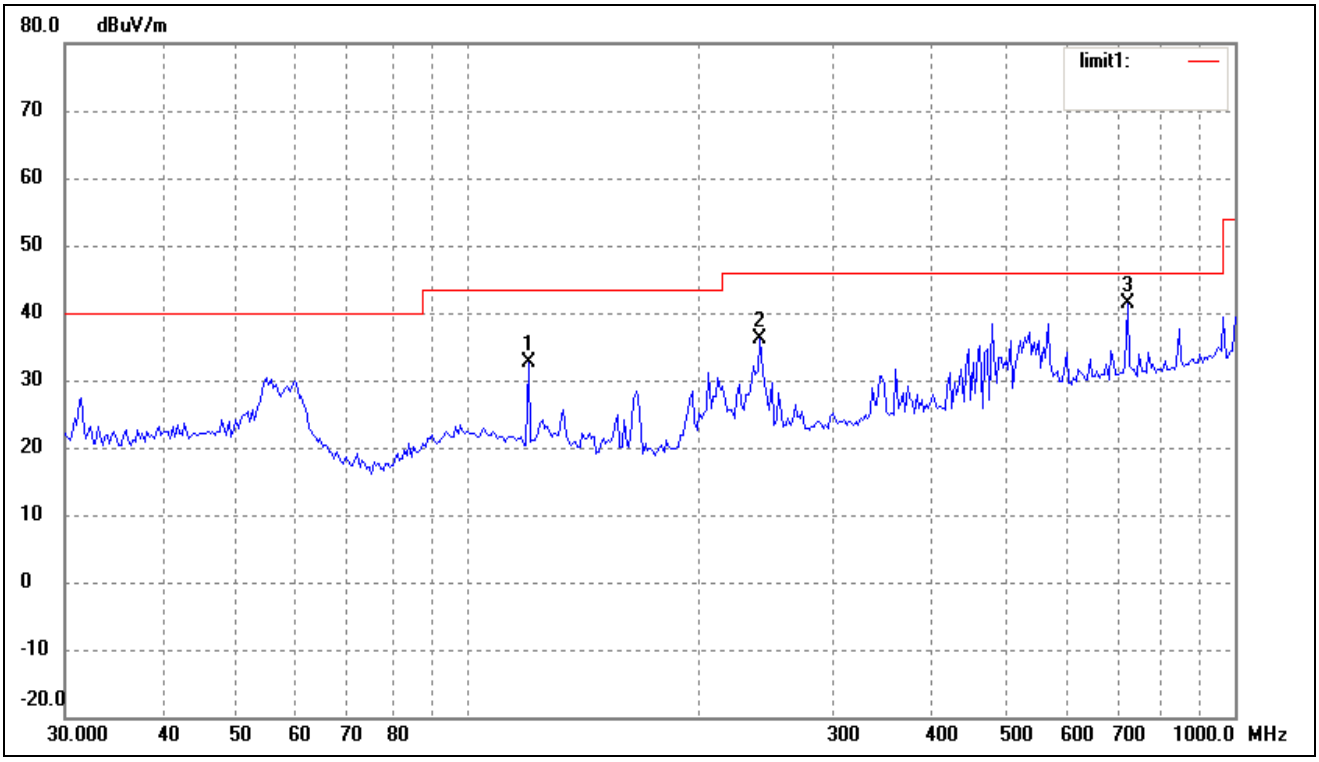
M/N: ARMM1

Operating Condition: Playing&Charging

Test Specification: Horizontal & Vertical

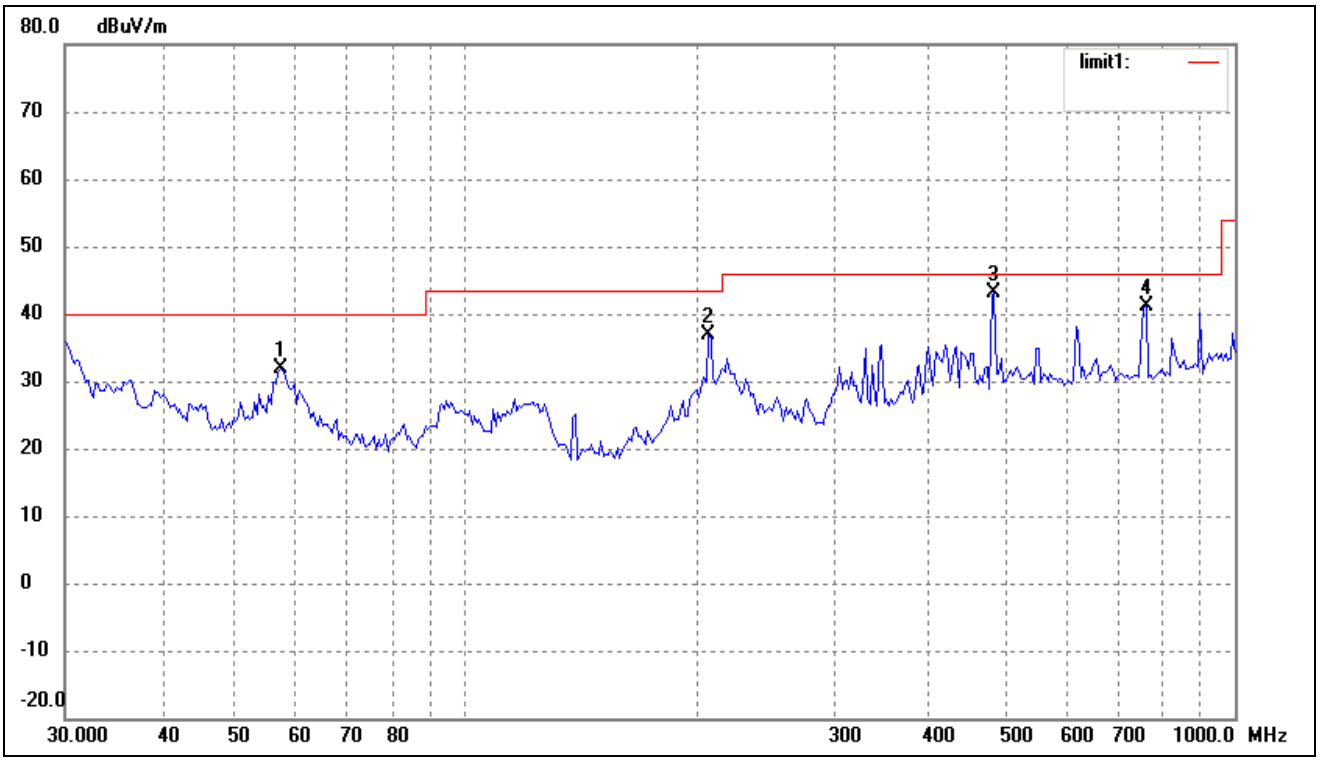
Comment: AC 120V/60Hz

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	120.2766	27.34	5.23	32.57	43.50	-10.93	360	100	peak
2	240.8304	28.70	7.46	36.16	46.00	-9.84	0	100	peak
3	724.2611	26.74	14.74	41.48	46.00	-4.52	206	125	QP

Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	57.1914	24.52	7.34	31.86	40.00	-8.14	360	100	peak
2	206.3976	30.91	5.89	36.80	43.50	-6.70	0	200	peak
3	485.6093	31.48	11.55	43.03	46.00	-2.97	215	114	QP
4	766.0571	25.95	15.17	41.12	46.00	-4.88	225	105	QP

Plot of Radiation Emissions Test Data

Radiated Disturbance

EUT: Mobile Internet Terminal

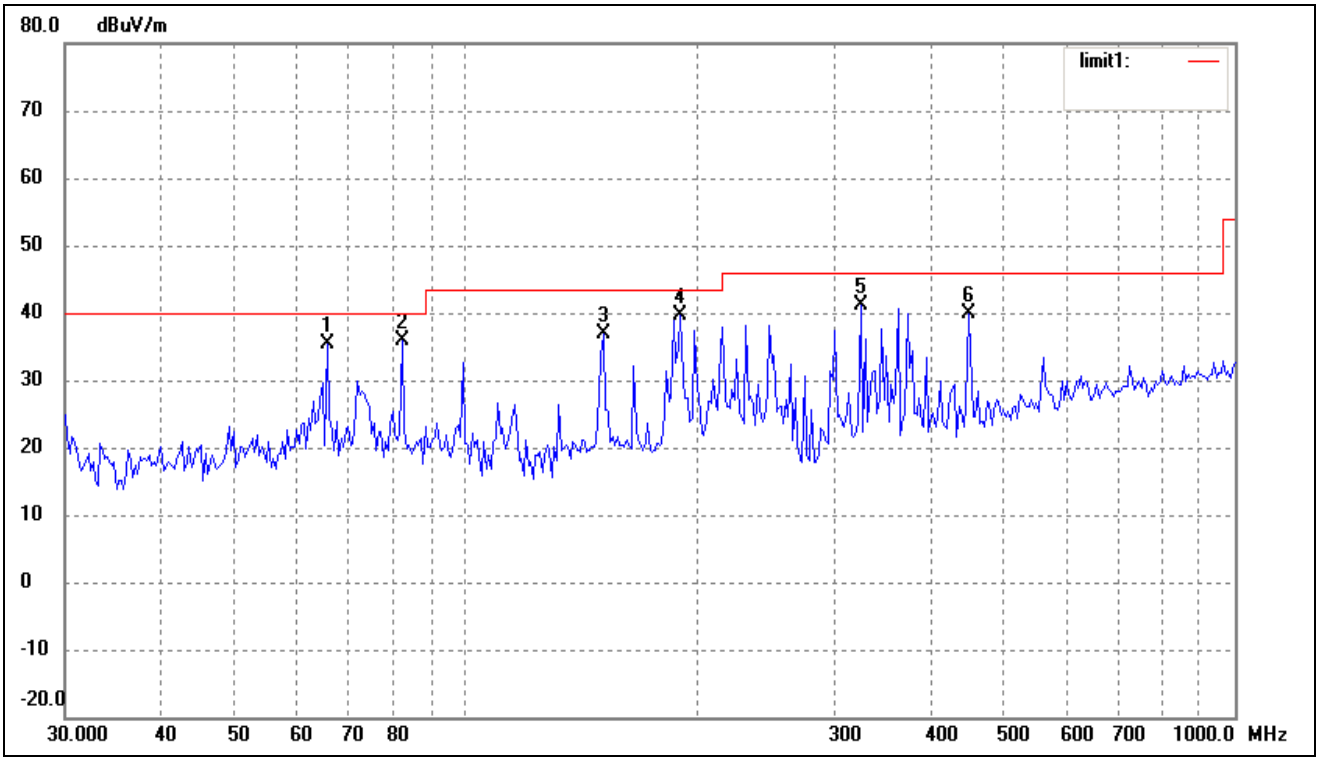
M/N: ARMM1

Operating Condition: Downloading

Test Specification: Horizontal & Vertical

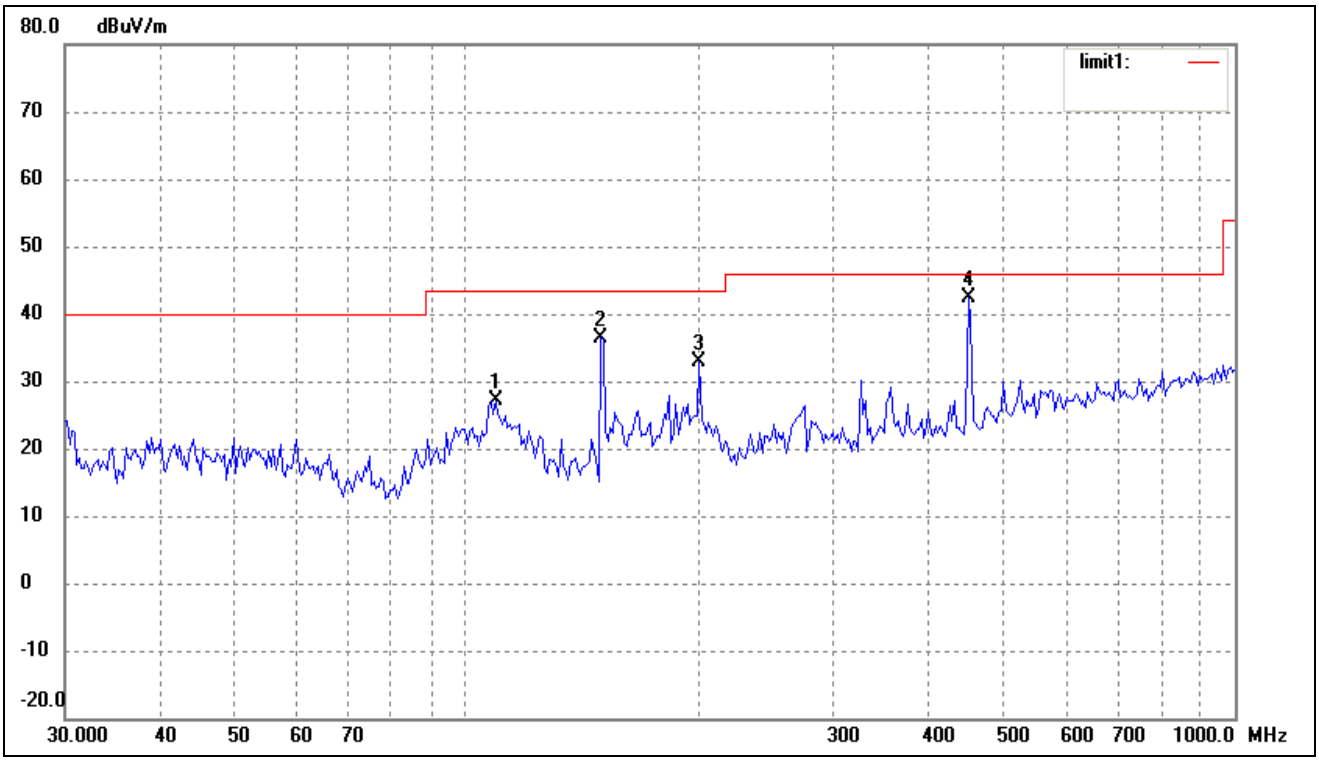
Comment: AC 120V/60Hz

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	65.8031	30.50	4.88	35.38	40.00	-4.62	205	128	QP
2	82.3589	31.83	3.99	35.82	40.00	-4.18	125	203	QP
3	150.5378	33.65	3.33	36.98	43.50	-6.52	360	100	peak
4	189.7384	33.91	5.64	39.55	43.50	-3.95	221	110	QP
5	325.5957	32.28	8.94	41.22	46.00	-4.78	109	157	QP
6	449.5557	29.28	10.58	39.86	46.00	-6.14	0	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	109.0285	20.17	7.03	27.20	43.50	-16.30	360	200	peak
2	149.4857	32.97	3.31	36.28	43.50	-7.22	0	100	peak
3	200.6880	27.08	5.70	32.78	43.50	-10.72	0	200	peak
4	449.5557	31.80	10.58	42.38	46.00	-3.62	126	205	QP

Plot of Radiation Emissions Test Data

Radiated Disturbance

EUT: Mobile Internet Terminal

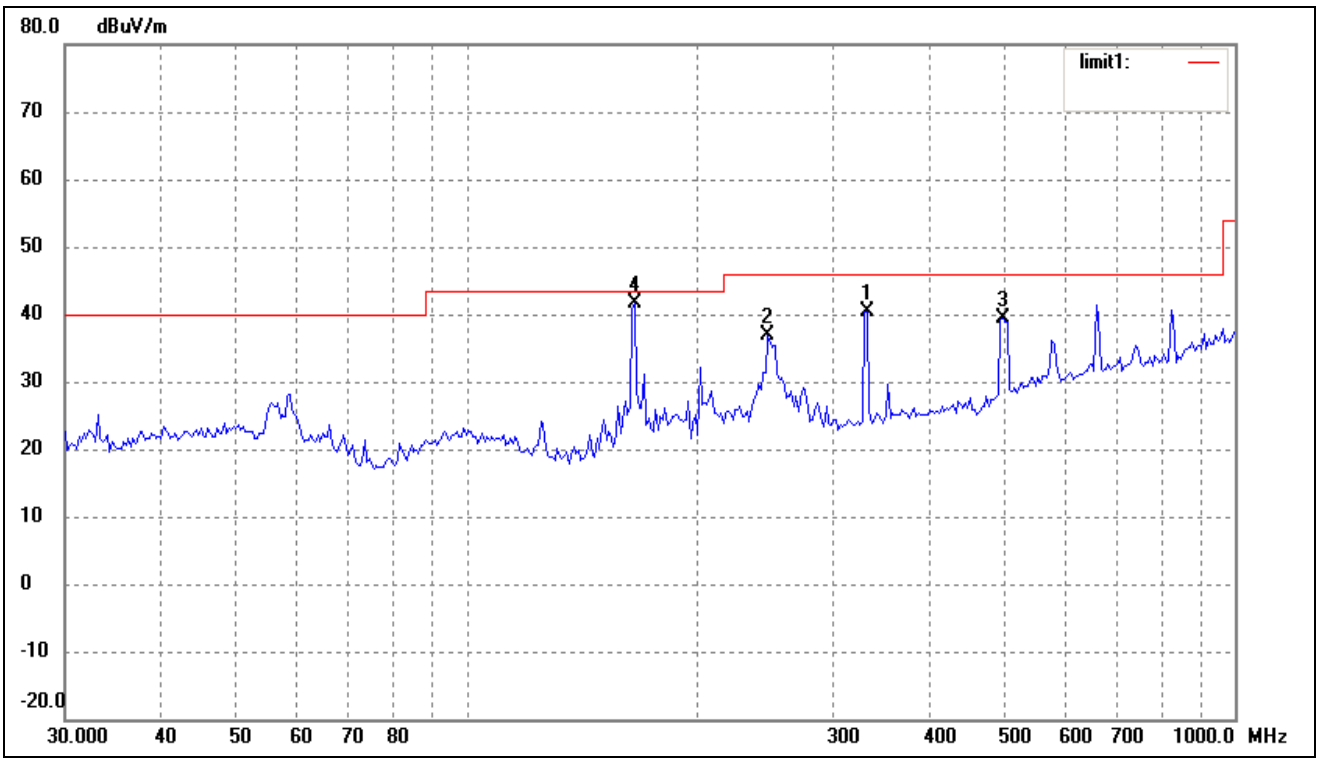
M/N: ARMM1

Operating Condition: HDMI OUT

Test Specification: Horizontal & Vertical

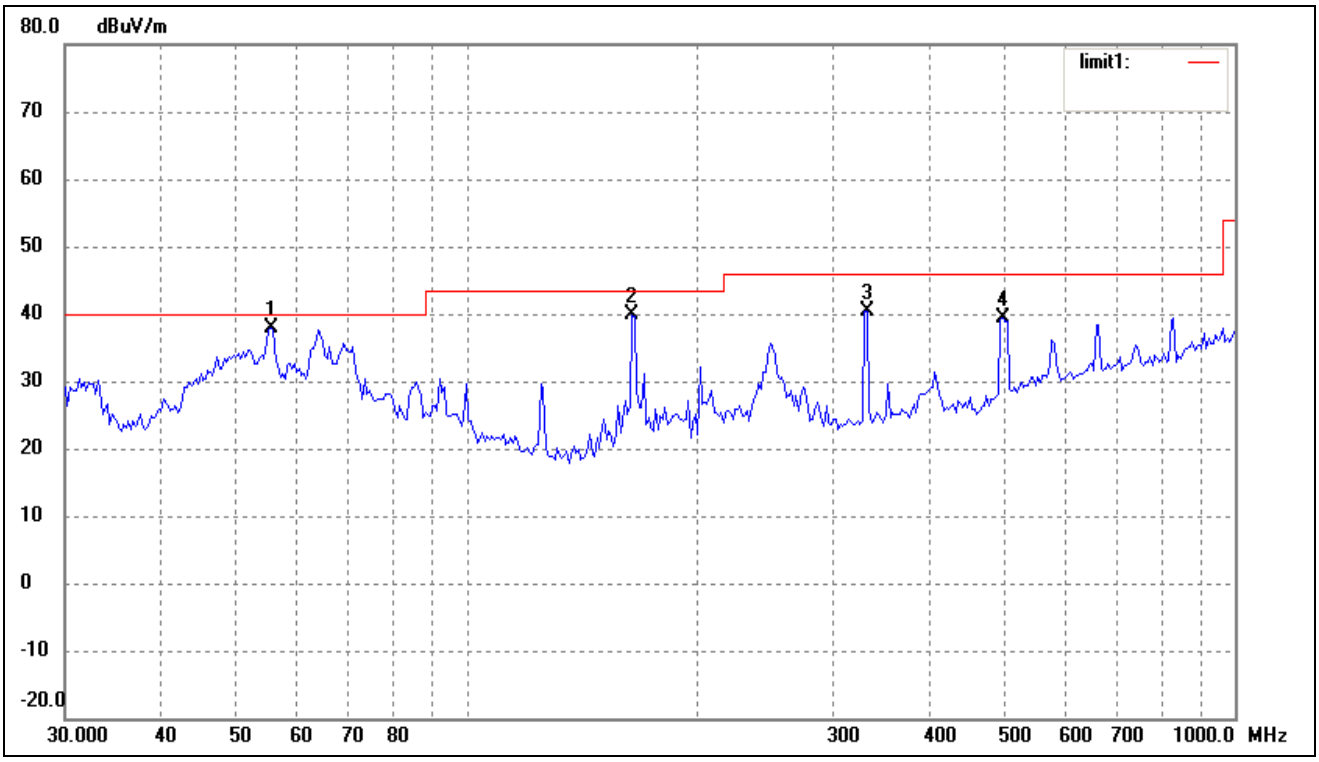
Comment: AC 120V/60Hz

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	331.7858	31.35	9.06	40.41	46.00	-5.59	360	100	peak
2	246.9901	29.33	7.60	36.93	46.00	-9.07	0	200	peak
3	498.7303	26.47	12.80	39.27	46.00	-6.73	0	200	peak
4	165.4716	37.71	3.92	41.63	43.50	-1.87	205	117	QP

Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	55.6781	30.50	7.43	37.93	40.00	-2.07	206	105	QP
2	164.3129	36.04	3.88	39.92	43.50	-3.58	302	159	QP
3	331.7857	31.35	9.06	40.41	46.00	-5.59	360	200	peak
4	498.7302	26.47	12.80	39.27	46.00	-6.73	0	100	peak

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