Lab Code: 200707-0

TEST REPORT

For

Archos SA

12, rue Ampere, Igny France

FCC PART 15B, CLASS B

FCC ID: SOVA28V

Report Type:	Product Type:
Original Report	MP4 Player

Test Engineer:	Lebron Wang
Report Number:	RSZ110530001-00
Report Date:	2011-06-13
Reviewed By:	Merry Zhao EMC Engineer
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008 http://www.baclcorp.com.cn/

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Archos SA*'s product, model number: *A28V (FCC ID: SOVA28V)* (the "EUT") in this report is a *MP4 player*, which was measured approximately: 9.8 cm (L) x 6.0 cm (W) x 1.0 cm (H), rated input voltage: AC 120V/60 Hz.

** All measurement and test data in this report was gathered from production sample serial number: 1105167 (Assigned by BACL, Shenzhen). The EUT was received on 2011-05-30.*

Objective

This report is prepared on behalf of *Archos SA* in accordance with Part 2-Subpart J, Part 15-Subparts A and B of the Federal Communication Commissions rules.

The objective of the manufacturer is to determine the compliance of EUT with FCC Part 15B, Class B.

Related Submittal(s)/Grant(s)

N/A

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on December 06, 2010. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratories Corp. (Shenzhen) is an ISO/IEC 17025 accredited laboratory, and is accredited by National Voluntary Laboratory Accredited Program (Lab Code 200707-0).

NVLAP®
Lab Code: 200707-0

The current scope of accreditations can be found at http://ts.nist.gov/Standards/scopes/2007070.htm.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a manufacturer testing fashion.

EUT Exercise Software

N/A

Equipment Modifications

No modification was made to the unit tested.

Host System Configuration List and Details

Manufacturer	Device Name	Model	Serial Number
DELL	Motherboard	OWC297	CN-OWC297-70821-566-02BR
DELL	Power	NPS-250KB D	CN-0H2678-17972-56E8NBM
Seagate	Hard Disk	ST340014A	5JXK3NAD
DELL	3.5' Floppy	N/A	CN-0N8893-69802-54Q-02OZ
Lite-ON	CD-Rom	LTN-489S	N/A
Intel	CPU	Celeron D-2533	N/A
ProMOS	Memory	V826632K24SATG-C0	0525-K1933700
Intel	Ethernet	PRO 10/100 VE	N/A

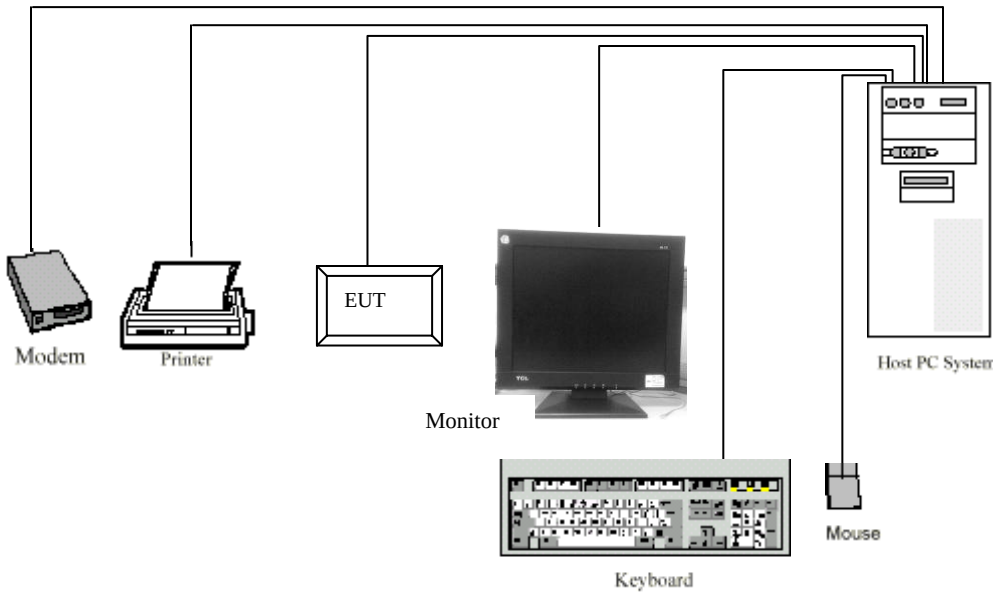
Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
DELL	PC	1#	N/A
DELL	Keyboard 2#	L100	CNORH656658907BL05DC
DELL	Mouse 2#	MOC5UO	G1900NKD
DELL	LCD 1#	E178WFPC	CN-OWY564-64180-7C4-2SQH
HP	Laser Jet5L	C3941A	JPTVOB2337
SAST	Modem	AEM-2100	0293

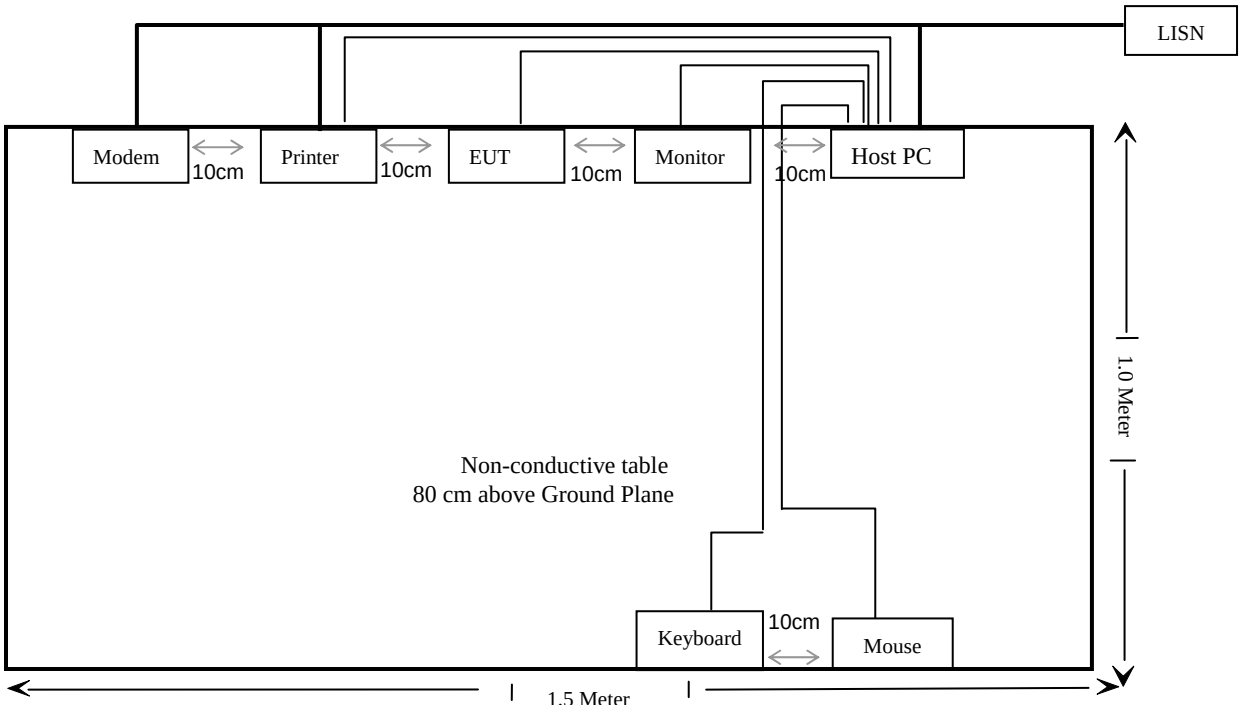
External I/O Cable

Cable Description	Length (m)	From/Port	To
Shielded Detachable K/B Cable	1.5	K/B Port/Host	K/B
Shielded Detachable Mouse Cable	1.5	Mouse Port/Host	Mouse
Shielded Detachable VGA Cable	1.5	VGA Port/Host	Monitor
Shielded Detachable Printer Cable	1.2	Parallel Port/Host	Printer
Shielded Detachable Serial Cable	1.2	Serial Port/Host	Modem
Unshielded Detachable USB Cable	1.05	EUT	PC

Configuration of Test Setup



Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§15.107	AC Line Conducted Emissions	Compliance
§15.109	Radiated Spurious Emissions	Compliance

Note: There are 5 operation modes on the EUT: music playing, video playing, audio recording, and radio receiving and downloading. For conducted emission (CE) test, the test of worst case on the downloading mode was performed and recorded in this report. For radiated emission (RE) test, the tests of worst cases on the video playing and downloading modes were performed and recorded in this report.

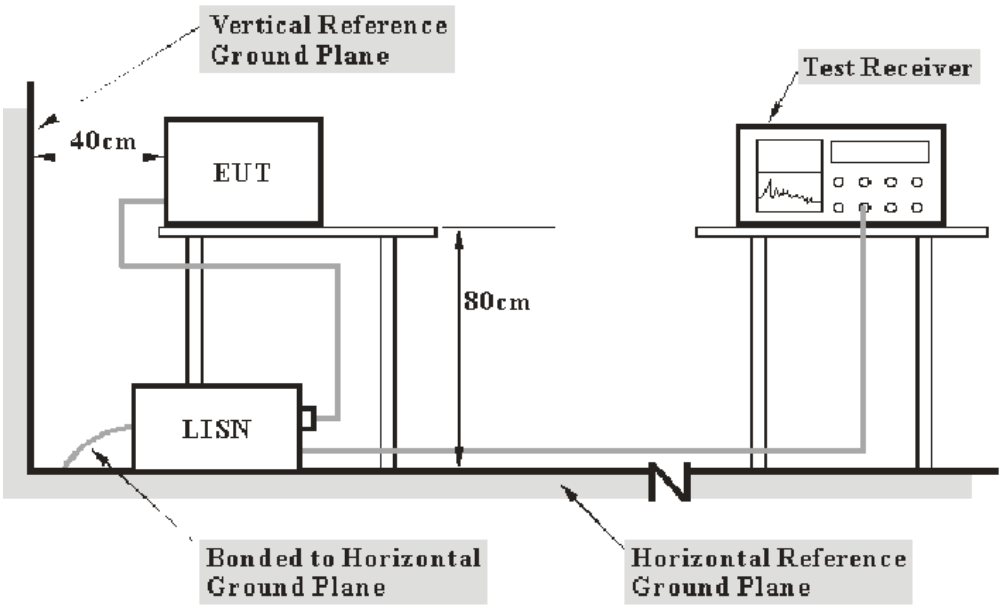
FCC §15.107 – AC LINE CONDUCTED EMISSIONS

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is ±2.4 dB.(k=2, 95% level of confidence)

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

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

The spacing between the peripherals was 10 cm.

The host PC was connected to a 120 VAC/60 Hz power source.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

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

Frequency Range	***IF B/W***
150 kHz – 30 MHz	9 kHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245/006	2011-03-03	2012-03-02
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2011-03-09	2012-03-08

*** Statement of Traceability:** Bay Area Compliance Laboratory Corp. attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

During the conducted emission test, the host PC was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.107, with the worst margin reading of:

8.95 dB at **1.010 MHz** in the **Line**conducted mode

Test Data

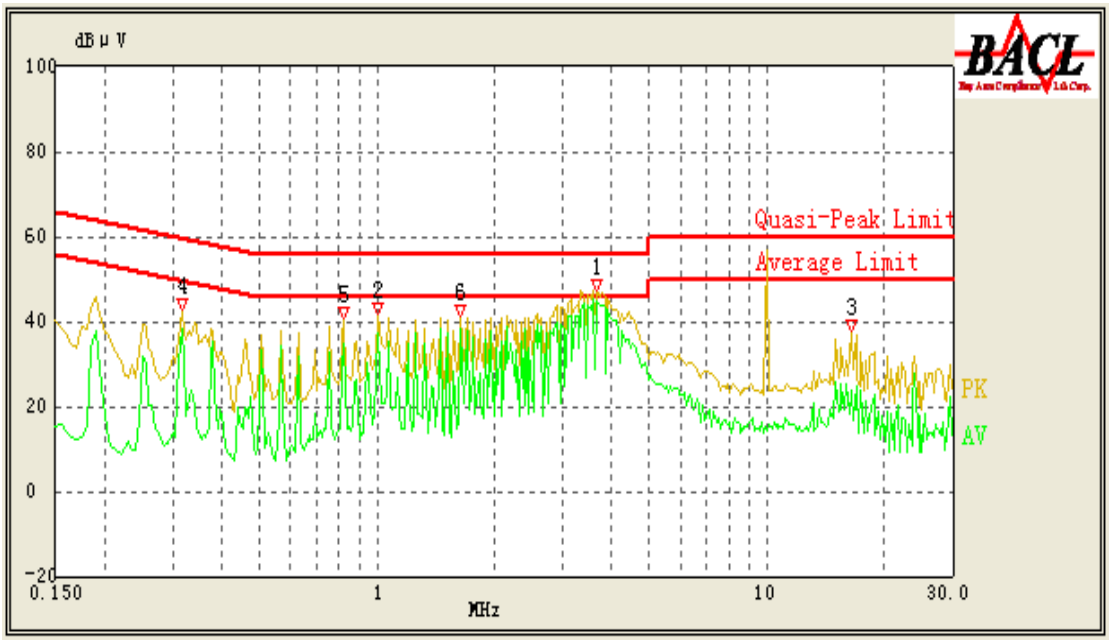
Environmental Conditions

Temperature:	25 °C
Relative Humidity:	48 %
ATM Pressure:	100.0 kPa

The testing was performed by Lebron Wang on 2011-06-04.

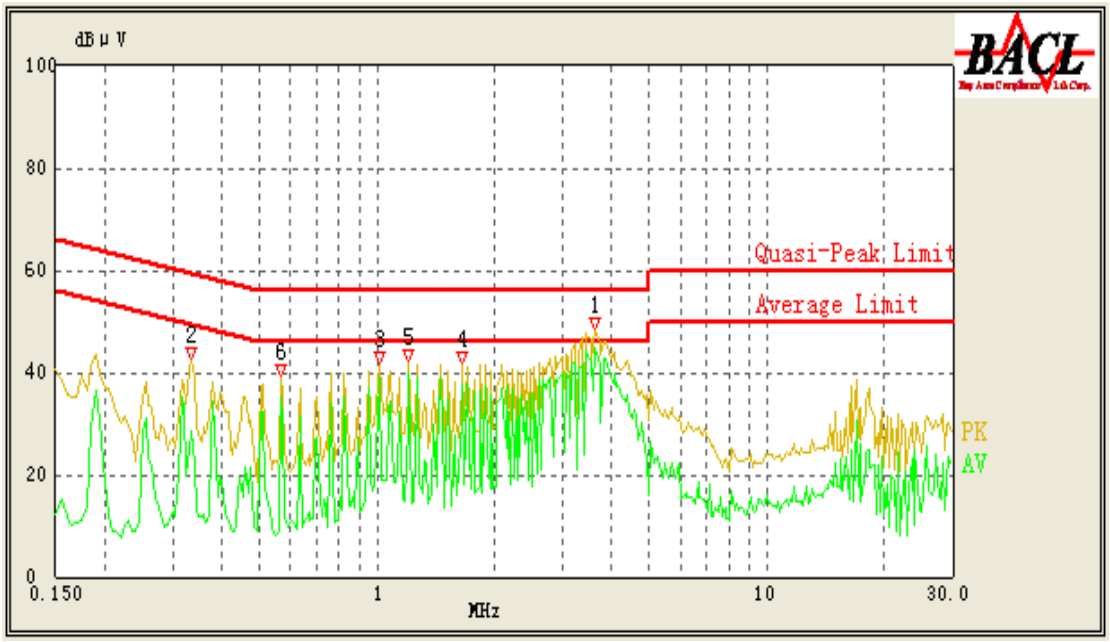
EUT operation mode: Downloading

AC 120V/60 Hz, Line:



Conducted Emissions FCC Part 15.107, Class B					
Frequency (MHz)	**Corrected Result (dBµV)**	**Correction Factor (dB)**	**Limit (dBµV)**	**Margin (dB)**	**Remark (PK/ QP/Ave.)**
1.010	37.05	10.10	46.00	8.95	Ave.
3.660	34.92	10.10	46.00	11.08	Ave.
0.820	34.72	10.10	46.00	11.28	Ave.
0.315	38.07	10.10	51.29	13.22	Ave.
1.640	32.19	10.10	46.00	13.81	Ave.
0.820	38.28	10.10	56.00	17.72	QP
1.010	37.50	10.10	56.00	18.50	QP
0.315	41.52	10.10	61.29	19.77	QP
3.660	35.01	10.10	56.00	20.99	QP
1.640	33.51	10.10	56.00	22.49	QP
16.485	23.84	10.10	50.00	26.16	Ave.
16.480	31.06	10.10	60.00	28.94	QP

AC 120V/60 Hz, Neutral:



Conducted Emissions FCC Part 15.107, Class B					
Frequency (MHz)	**Corrected Result (dBµV)**	**Correction Factor (dB)**	**Limit (dBµV)**	**Margin (dB)**	**Remark (PK/ QP/Ave.)**
0.570	35.35	10.10	46.00	10.65	Ave.
3.615	34.55	10.10	46.00	11.45	Ave.
1.205	31.92	10.10	46.00	14.08	Ave.
1.015	29.06	10.10	46.00	16.94	Ave.
0.570	38.74	10.10	56.00	17.26	QP
1.650	27.55	10.10	46.00	18.45	Ave.
3.615	35.64	10.10	56.00	20.36	QP
1.015	35.51	10.10	56.00	20.49	QP
1.205	34.27	10.10	56.00	21.73	QP
0.335	28.66	10.10	50.71	22.05	Ave.
0.335	38.39	10.10	60.71	22.32	QP
1.650	29.16	10.10	56.00	26.84	QP

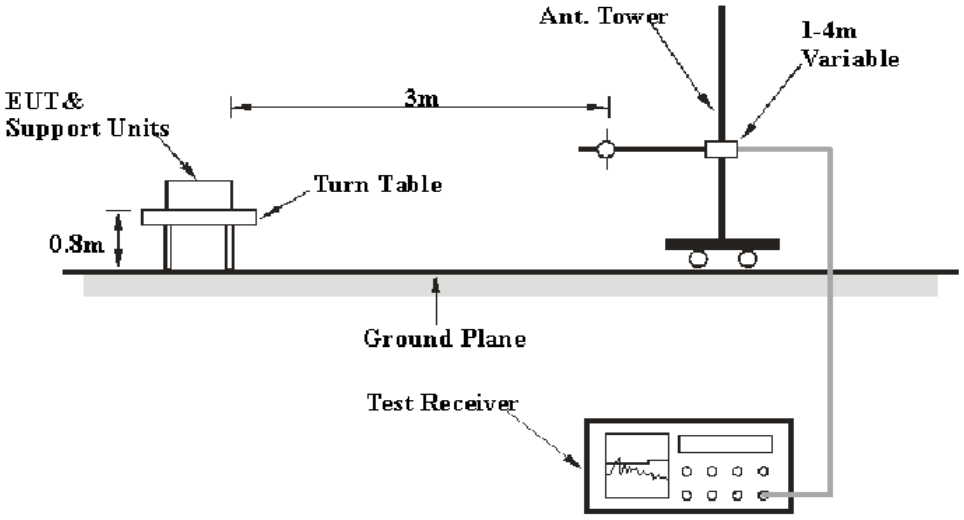
FCC §15.109 - RADIATED SPURIOUS EMISSIONS

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is ±4.0 dB. (k=2, 95% level of confidence)

EUT Setup



The radiated emission tests were performed in the 3 meters chamber B test site, using the setup accordance with the ANSI C63.4-2009. The specification used was the FCC Part 15.109 Class B limits.

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.

The host PC was connected to a 120 VAC/60 Hz power source.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 2000 MHz.

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

Frequency Range	***RBW***	***VBW***	***Detector***
30 MHz – 1000 MHz	100 kHz	300 kHz	QP
1000 MHz – 2000 MHz	1 MHz	3 MHz	Peak
1000 MHz – 2000 MHz	1 MHz	10Hz	Ave

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	HP8447D	2944A09795	2010-08-02	2011-08-01
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2010-11-11	2011-11-10
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2010-07-05	2011-07-04
Mini-Circuits	Amplifier	ZVA-213+	T-E27H	2011-03-08	2012-03-07
Sunol Sciences	Horn Antenna	DRH-118	A052604	2011-05-05	2012-05-04
Rohde & Schwarz	Spectrum Analyzer	FSEM30	849720/019	2010-07-08	2011-07-07

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp (Shenzhen). attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

For the radiated emissions test, the host PC was connected to AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the Quasi-peak detection mode from 30 MHz to 1 GHz, and peak and average for above 1 GHz.

Corrected Amplitude & Margin Calculation

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

Corrected Amplitude = Meter Reading + Antenna Loss + Cable Loss - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Corrected Amplitude

Test Results Summary

According to the data in the following table, the EUT complied with the FCC §15.109 Class B, with the worst margin reading of:

2.6 dB at **749.389750 MHz** in the **Horizontal** polarization for downloading mode

Test Data

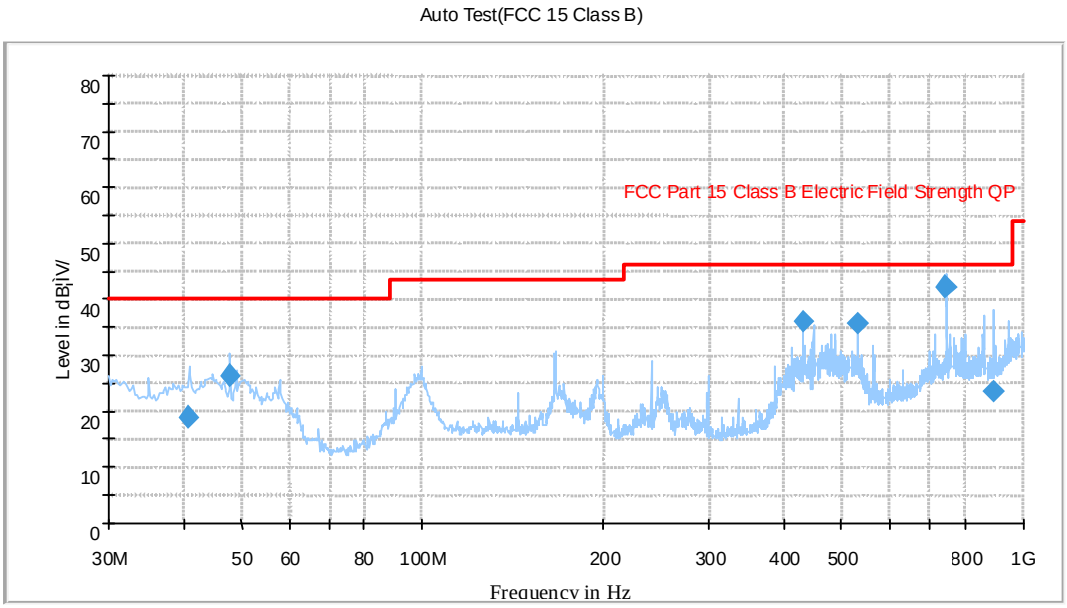
Environmental Conditions

Temperature:	25 °C
Relative Humidity:	48 %
ATM Pressure:	100.0 kPa

The testing was performed by Lebron Wang on 2011-06-04.

Below 1 GHz:

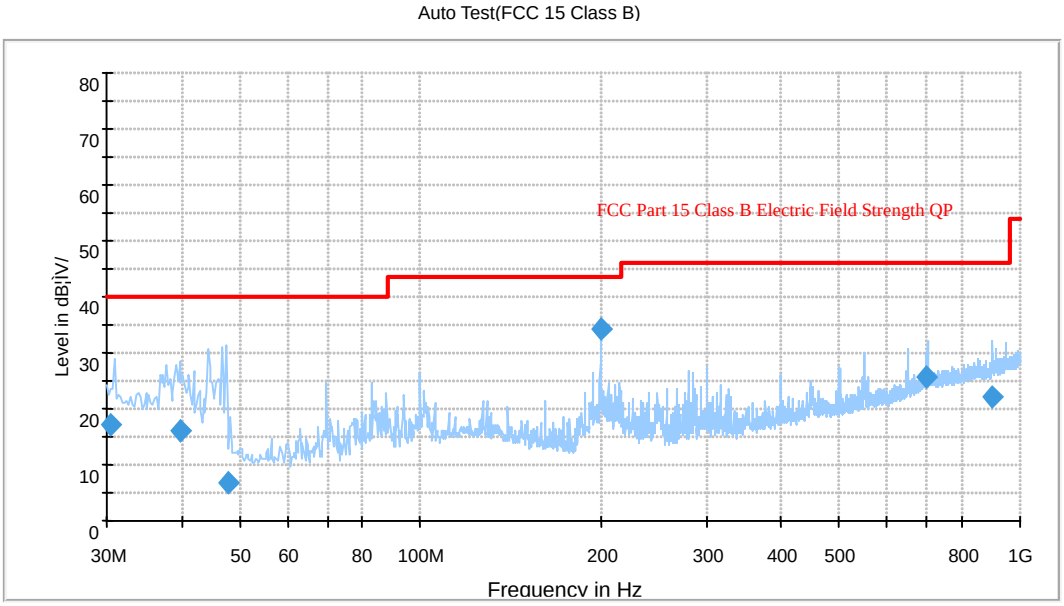
EUT operation mode: Downloading



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
749.389750	43.4	141.0	H	309.0	-2.4	46.0	2.6*
432.002750	36.0	102.0	V	262.0	-9.4	46.0	10.0
527.991750	35.7	102.0	V	254.0	-7.9	46.0	10.3
48.002750	26.5	101.0	V	318.0	-16.4	40.0	13.5
40.724500	18.9	121.0	V	271.0	-12.6	40.0	21.1
890.615500	23.7	103.0	V	284.0	-1.2	46.0	22.3

*Within measurement uncertainty!

EUT operation mode: Video Playing



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
30.579500	17.2	210.0	V	232.0	-5.8	40.0	22.8
39.836750	15.9	120.0	V	159.0	-12.0	40.0	24.1
47.696750	6.8	353.0	H	217.0	-16.3	40.0	33.2
199.978250	34.3	121.0	H	76.0	-14.4	43.5	9.2
700.294750	25.7	102.0	H	86.0	-3.1	46.0	20.3
895.774750	22.0	102.0	H	157.0	-1.0	46.0	24.0

Above 1 GHz:

EUT operation mode: Downloading

Frequency (MHz)	S.A. Reading (dBuV)	Detector (PK/QP/Ave)	Turntable Direction Degree	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Corrd. Data (dBuV/m)	Limit (dBuV/m)	Margin (dB)
				Height (m)	Polar (H /V)	Factor (dB/m)					
1450.50	37.42	Ave.	210	1.4	H	25.1	2.24	26.64	38.12	54	15.88
1672.38	36.48	Ave.	335	1.6	V	25.3	2.30	26.52	37.56	54	16.44
1450.50	46.73	PK	210	1.5	H	25.1	2.24	26.64	47.43	74	26.57
1672.38	39.23	PK	335	1.3	V	25.3	2.30	26.52	40.31	74	33.69

EUT operation mode: Video Playing

Frequency (MHz)	S.A. Reading (dBuV)	Detector (PK/QP/Ave)	Turntable Direction Degree	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Corrd. Data (dBuV/m)	Limit (dBuV/m)	Margin (dB)
				Height (m)	Polar (H /V)	Factor (dB/m)					
1240.50	36.59	Ave.	210	1.4	H	23.6	2.06	26.49	35.76	54	18.24
1516.00	32.48	Ave.	335	1.6	V	25.3	2.25	26.50	33.53	54	20.47
1516.00	46.73	PK	335	1.3	V	25.3	2.25	26.50	47.78	74	26.22
1240.50	42.93	PK	210	1.5	H	23.6	2.06	26.49	42.10	74	31.90

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