FCC PART 15.109
MEASUREMENT AND TEST REPORT
FOR

DANE-ELEC MEMORY

159, AVENUE GALLIENI-B.P.33 93171 BAGNOLET CEDEX,

BAGNOLET, FRANCE

FCC ID: VZWSRM

Report Concerns: Original Report	**Equipment Type:** HDD MEDIA PLAYER
Model:	SO ROAD MOVIE
Report No.:	STR08078122I
Test/Witness Engineer:	Seven Song
Test Date:	2008-07-26-2008-08-04
Issued Date:	2008-08-05
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）
Approved & Authorized By:	Jandy So /PSQ Manager

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.

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: DANE-ELEC MEMORY

Address of applicant: 159, AVENUE GALLIENI-B.P.33 93171 BAGNOLET CEDEX, BAGNOLET, FRANCE

Manufacturer: UNICORN INFORMATION SYSTEM CO., LTD.

Address of manufacturer: 5F, UNBO BUILDING 226-16 SUCKCHON-DONG SONGPA-GU, SEOUL, KOREA

General Description of E.U.T

Items	Description
EUT Description:	HDD MEDIA PLAYER
Trade Name:	/
Model No.:	SO ROAD MOVIE
Rate Current:	5V
Rate Voltage:	2.6A
Size:	13.5 x7.8 x2.3 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.

1.2 Test Standards

The following report is prepared on behalf of the DANE-ELEC MEMORY 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 15.107, and 15.109 rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission/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 C63.4-2003, 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.

The equipment under test (EUT) was configured to measure its highest possible immunity level. Test is carried with playing mode which worst case has been showed. Test setup was adapted accordingly in reference to the Operating Instructions.

1.5 Test Facility

The 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 files which the Registration No.: **994117**. Measurement required was performed at laboratory of SEM.Test Compliance Service Co., Ltd. at 3/F, Jinbao Commerce Building, Xin'an Fanshen Road, Bao'an District, Shenzhen, P.R.C. (518101).

1.6 Accessories Equipment List and Details

Manufacturer	Description	Model	Serial Number
HONGFA	TV	HF19	/

1.7 EUT Cable List and Details

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

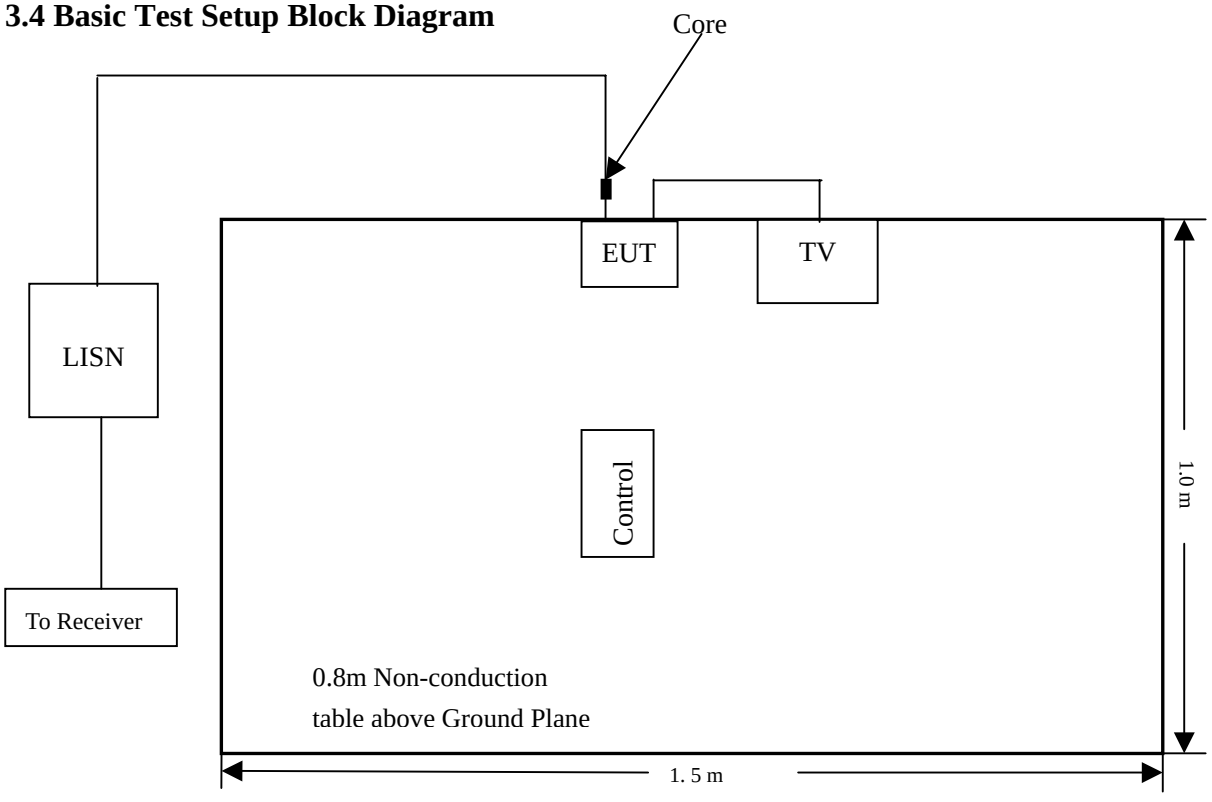
3.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Aglient	E4402B-ESA	US41192821	2008-01-25	2009-01-24
EMI Test Receiver	ROHDE&SCHWARZ	ESPI	101206	2008-01-25	2009-01-24
L.I.S.N.	SCHWARZBECK	NSLK8126	8126-224	2008-01-25	2009-01-24
L.I.S.N.	EMCO	3825/2	11967C	2008-01-25	2009-01-24

3.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.107 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:	55%
ATM Pressure:	1010 mbar

3.6 Summary of Test Results/Plots

According to the data in section 3.7, the EUT complied with the FCC 15B Conducted margin for a Class B device, with the worst margin reading of:

-1.1 dBµV at **23.422 MHz** in the **Neutral** mode *(Playing)***, Average** detector, **0.15-30MHz**
-7.7 dBµV at **0.726 MHz** in the **Line** mode *(Downloading)***, Average** detector, **0.15-30MHz**

3.7 Conducted Emissions Test Data

Test Mode: Playing

LINE CONDUCTED EMISSIONS				FCC 15B CLASS B	
Frequency	Amplitude	Detector	Phase	Limit	Margin
MHz	dBµV	QP/Ave/Pk	Line/Neutral	dBµV	dB
23.422	48.92	Ave	Neutral	50	-1.1
23.418	47.66	Ave	Line	50	-2.3
0.214	46.40	Ave	Neutral	53.05	-6.6
0.746	38.69	Ave	Line	46	-7.3
23.402	42.23	Ave	Neutral	50	-7.8
0.322	41.61	Ave	Neutral	49.66	-8.0
23.422	51.67	Pk	Neutral	60	-8.3
0.214	44.69	Ave	Line	53.05	-8.4
23.422	49.66	Pk	Line	60	-10.3
0.322	39.15	Ave	Line	49.66	-10.5
0.746	44.22	Pk	Neutral	56	-11.8
0.746	44.14	Pk	Line	56	-11.9
0.858	43.19	Pk	Line	56	-12.8
0.214	49.79	Pk	Neutral	63.05	-13.3
0.214	47.83	Pk	Line	63.05	-15.2
0.322	44.40	Pk	Neutral	59.66	-15.3
0.322	43.25	Pk	Line	59.66	-16.4
0.170	45.81	Pk	Neutral	64.96	-19.2
0.162	45.68	Pk	Neutral	65.36	-19.7
0.158	45.57	Pk	Line	65.57	-20.0

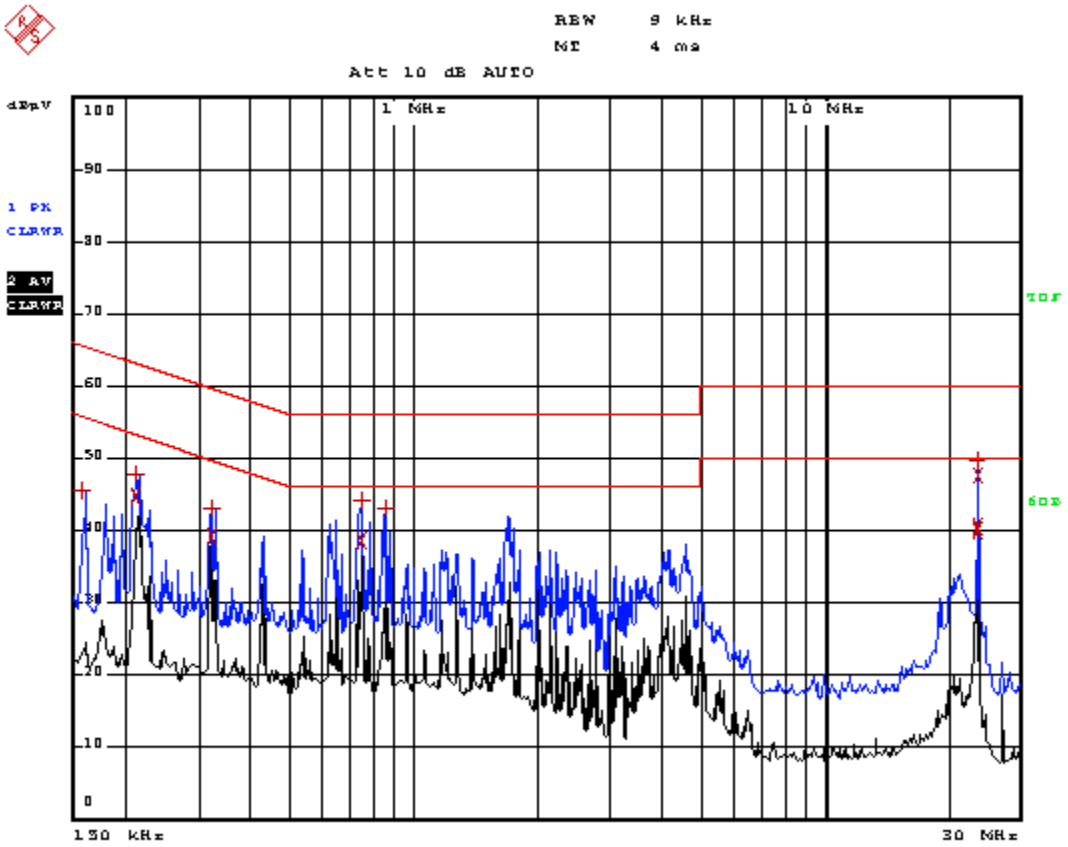
Test Mode: Downloading

LINE CONDUCTED EMISSIONS				FCC 15B CLASS B	
FFrequency	Amplitude	Frequency	Amplitude	Frequency	Amplitude
MHz	dBμV	MHz	dBμV	MHz	dBμV
0.726	38.32	Ave	Line	46	-7.7
1.794	38.03	Ave	Line	46	-8.0
0.902	37.27	Ave	Neutral	46	-8.7
0.202	44.50	Ave	Line	53.53	-9.0
0.226	43.49	Ave	Neutral	52.6	-9.1
0.450	35.91	Ave	Neutral	46.88	-11.0
4.378	33.75	Ave	Neutral	46	-12.3
2.51	33.32	Ave	Line	46	-12.7
0.710	42.04	Pk	Neutral	56	-14.0
0.726	41.47	Pk	Line	56	-14.5
0.902	40.68	Pk	Neutral	56	-15.3
1.678	39.99	Pk	Line	56	-16.0
4.39	39.52	Pk	Neutral	56	-16.5
0.226	45.85	Pk	Line	62.6	-16.7
0.226	45.85	Pk	Neutral	62.6	-16.7
4.41	37.80	Pk	Line	56	-18.2

Note: Emissions attenuation more than 20dB below maximum permissible value are not report.

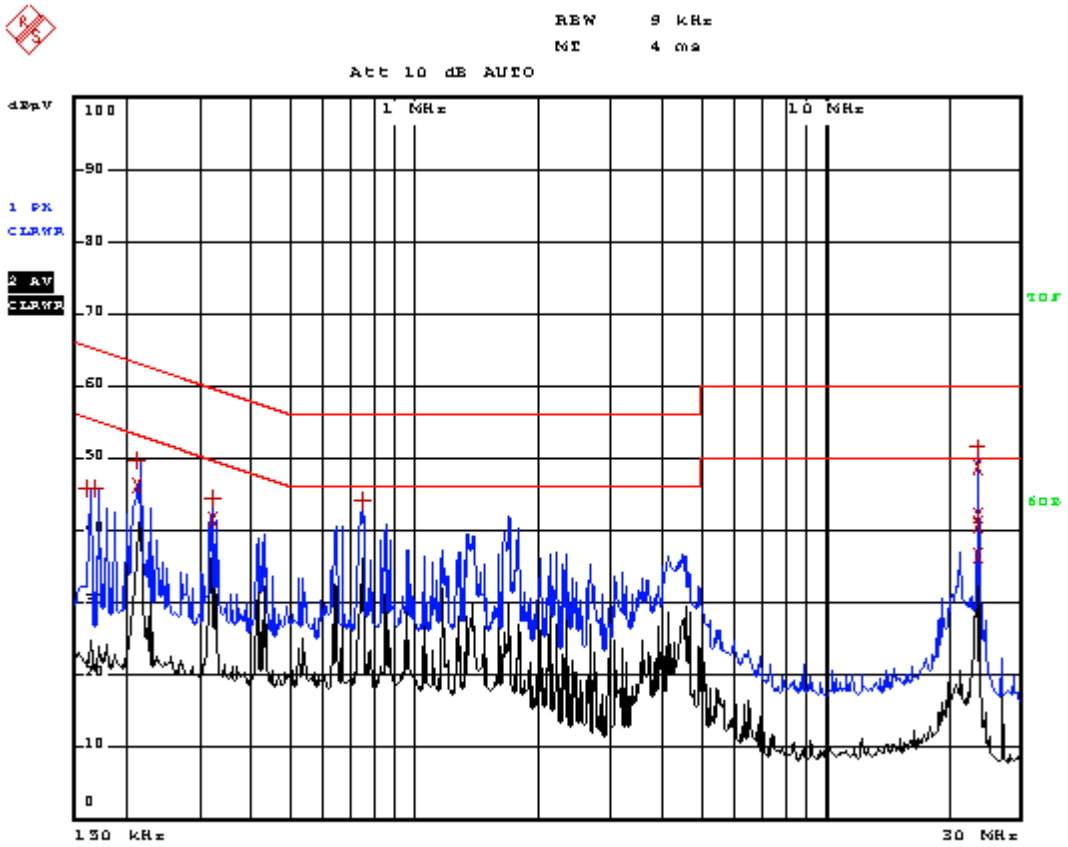
Plot of Conducted Emissions Test Data

Conducted Disturbance
EUT: HDD MEDIA PLAYER
M/N: SO ROAD MOVIE
Operating Condition: Playing
Test Specification: N
Comment: AC 120V/60Hz Connect to TV



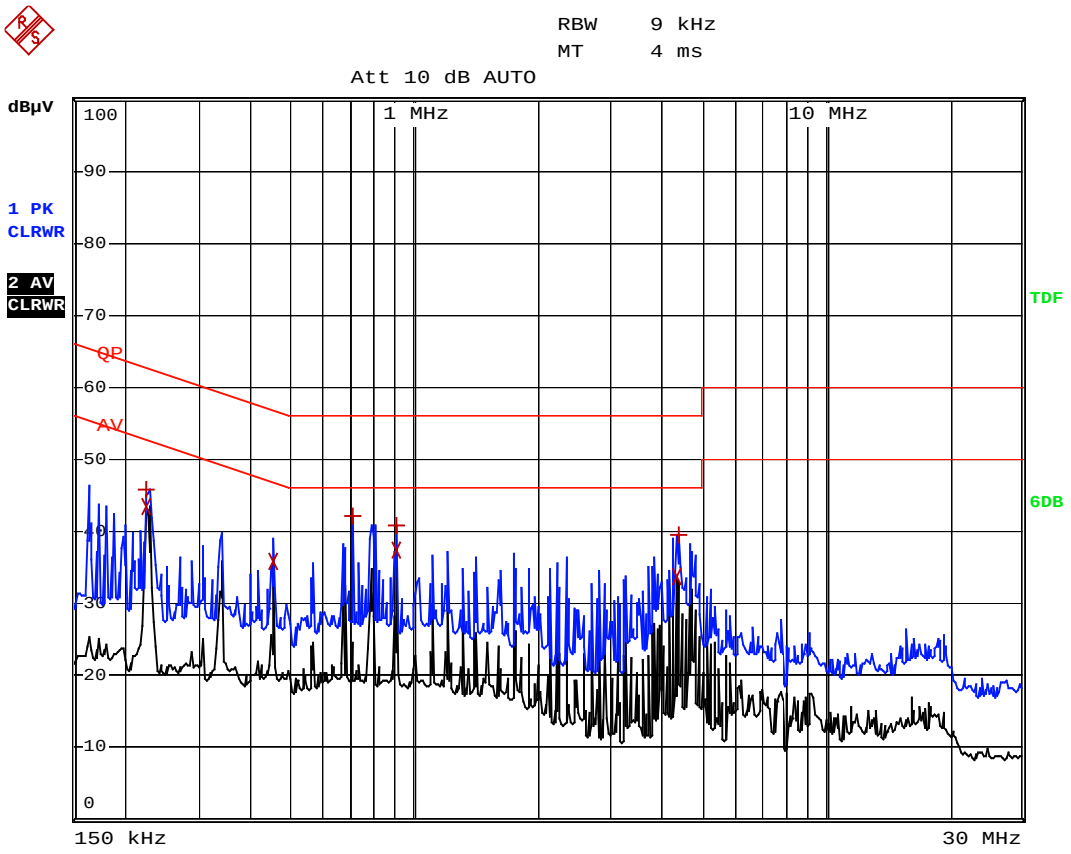
Plot of Conducted Emissions Test Data

Conducted Disturbance
EUT: HDD MEDIA PLAYER
M/N: SO ROAD MOVIE
Operating Condition: Playing
Test Specification: L
Comment: AC 120V/60Hz Connect to TV



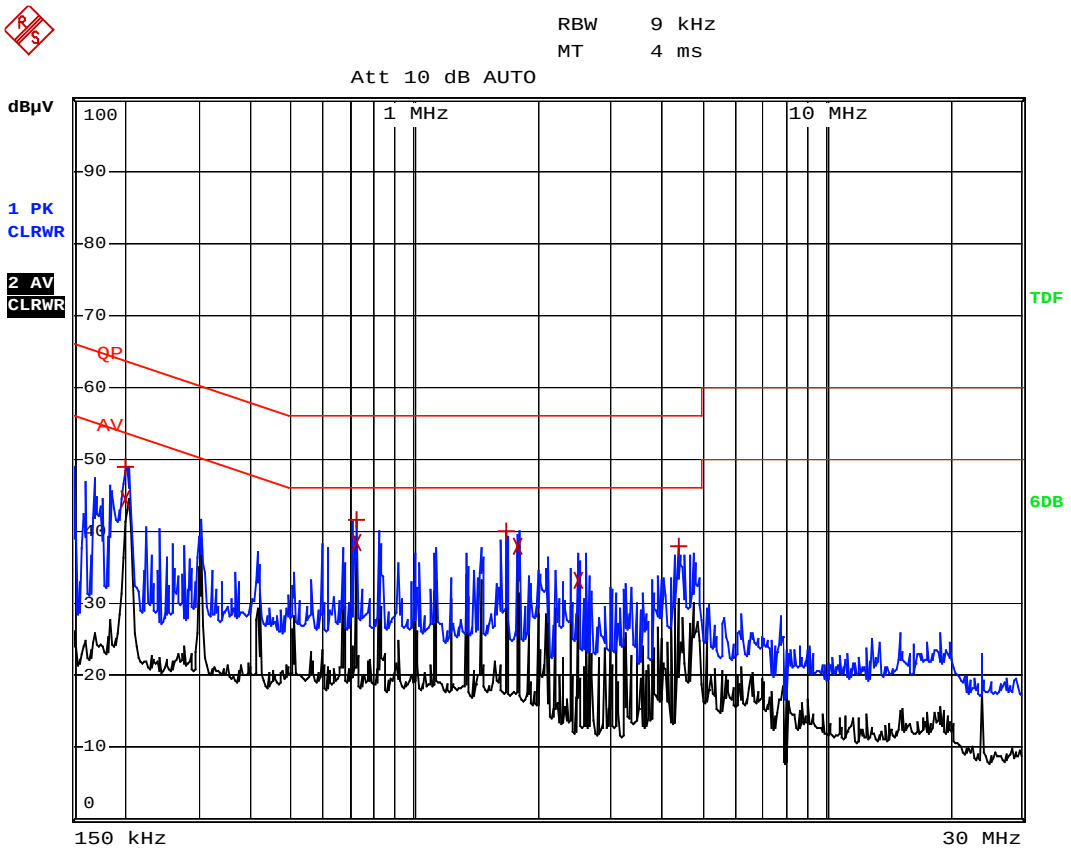
Plot of Conducted Emissions Test Data

Conducted Disturbance
EUT: HDD MEDIA PLAYER
M/N: SO ROAD MOVIE
Operating Condition: Downloading
Test Specification: N
Comment: AC 120V/60Hz Connect to PC



Plot of Conducted Emissions Test Data

Conducted Disturbance
EUT: HDD MEDIA PLAYER
M/N: SO ROAD MOVIE
Operating Condition: Downloading
Test Specification: L
Comment: AC 120V/60Hz Connect to PC



4. §15.109(a)- RADIATED EMISSION

4.1 Measurement Uncertainty

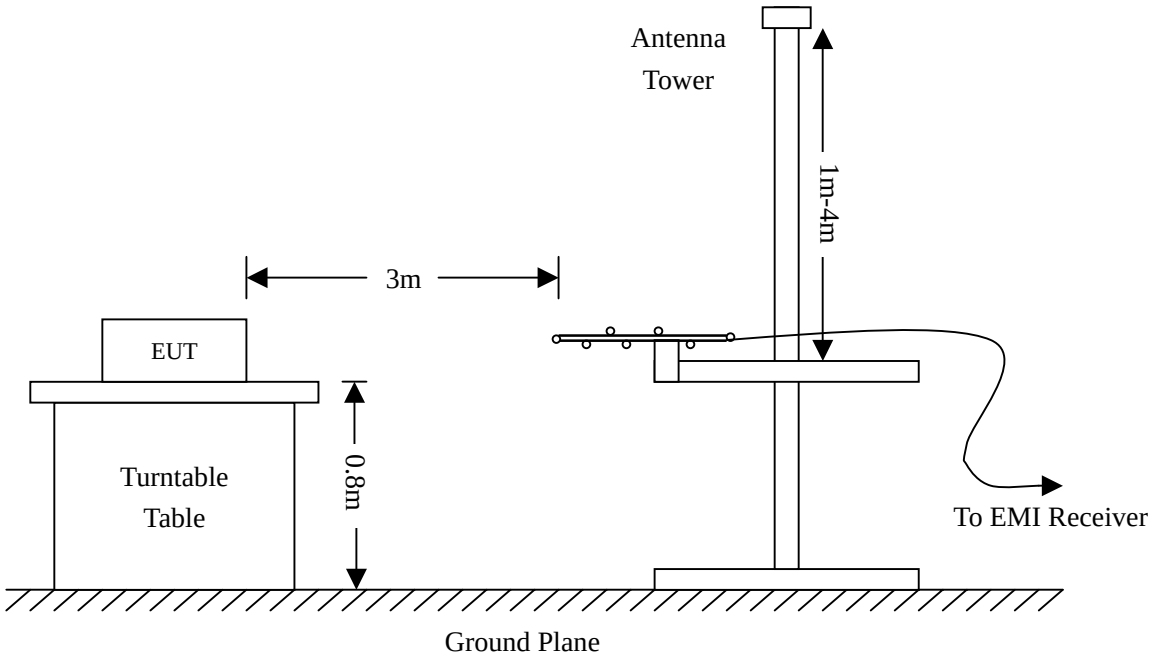
Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 3.0 dB.

4.2 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	ROHDE&SCHWARZ	FSEA20	DE25181	2008-01-25	2009-01-24
Positioning Controller	C&C	CC-C-1F	N/A	2008-01-25	2009-01-24
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2008-01-25	2009-01-24
Horn Antenna	SCHWARZBECK	BBHX 9120	9120-426	2008-01-25	2009-01-24
RF Switch	EM	EMSW18	SW060023	2008-01-25	2009-01-24
Amplifier	Agilent	8447F	3113A06717	2008-01-25	2009-01-24
Coaxial Cable	SCHWARZBECK	AK9513	9513-10	2008-01-25	2009-01-24
EMI Test Receiver	ROHDE&SCHWARZ	ESPI	25498514	2008-01-25	2009-01-24

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 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

4.5 Environmental Conditions

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

4.6 Summary of Test Results/Plots

According to the data in section 4.6, the EUT complied with the FCC 15 Class B standards, and had the worst margin is:

-5.57 dBμV at **40.2995 MHz** in the, **Vertical** polarization (Connect to TV), **30 MHz to 1 GHz, 3Meters**

-2.29 dBμV at **73.7496 MHz** in the, **Vertical** polarization (Connect to PC), **30 MHz to 1 GHz, 3Meters**

Plot of Radiation Emissions Test Data

Radiated Emission

EUT: HDD MEDIA PLAYER

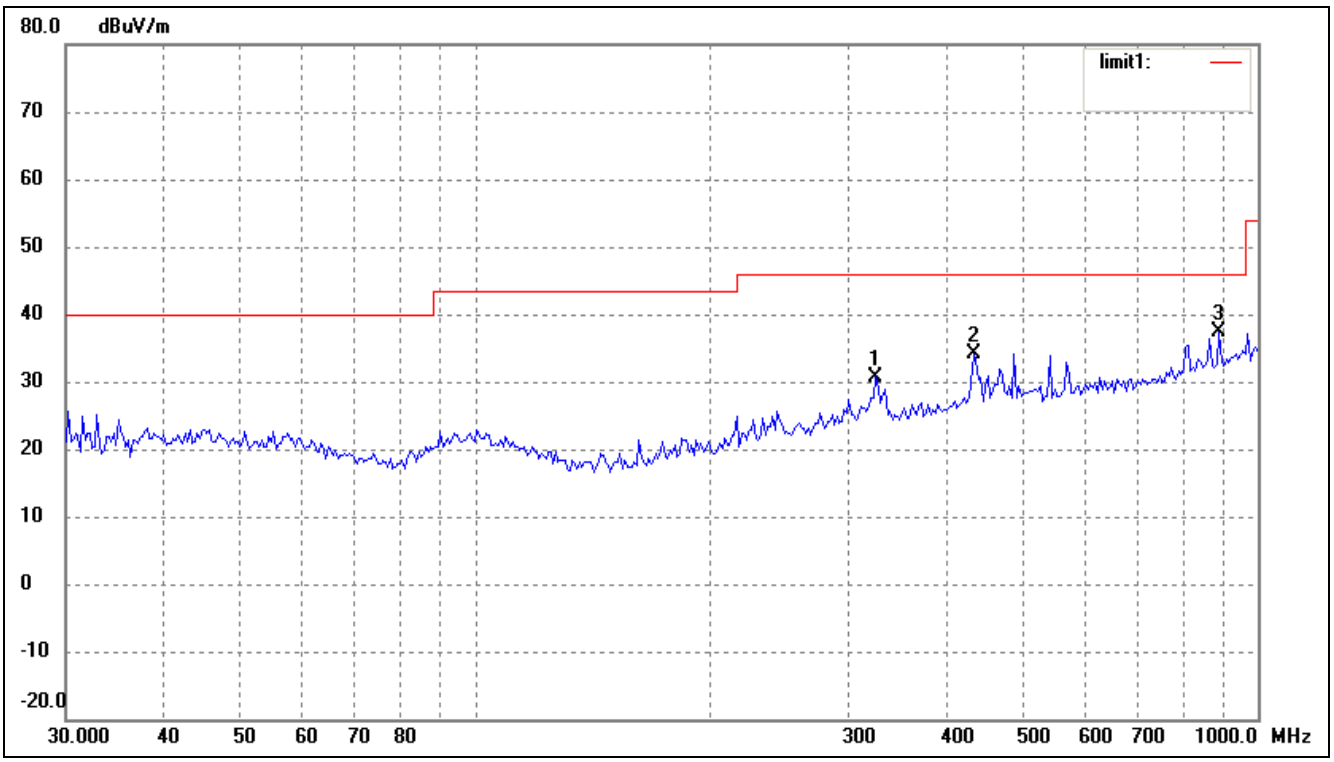
M/N: SO ROAD MOVIE

Operating Condition: Playing

Test Specification: Horizontal & Vertical

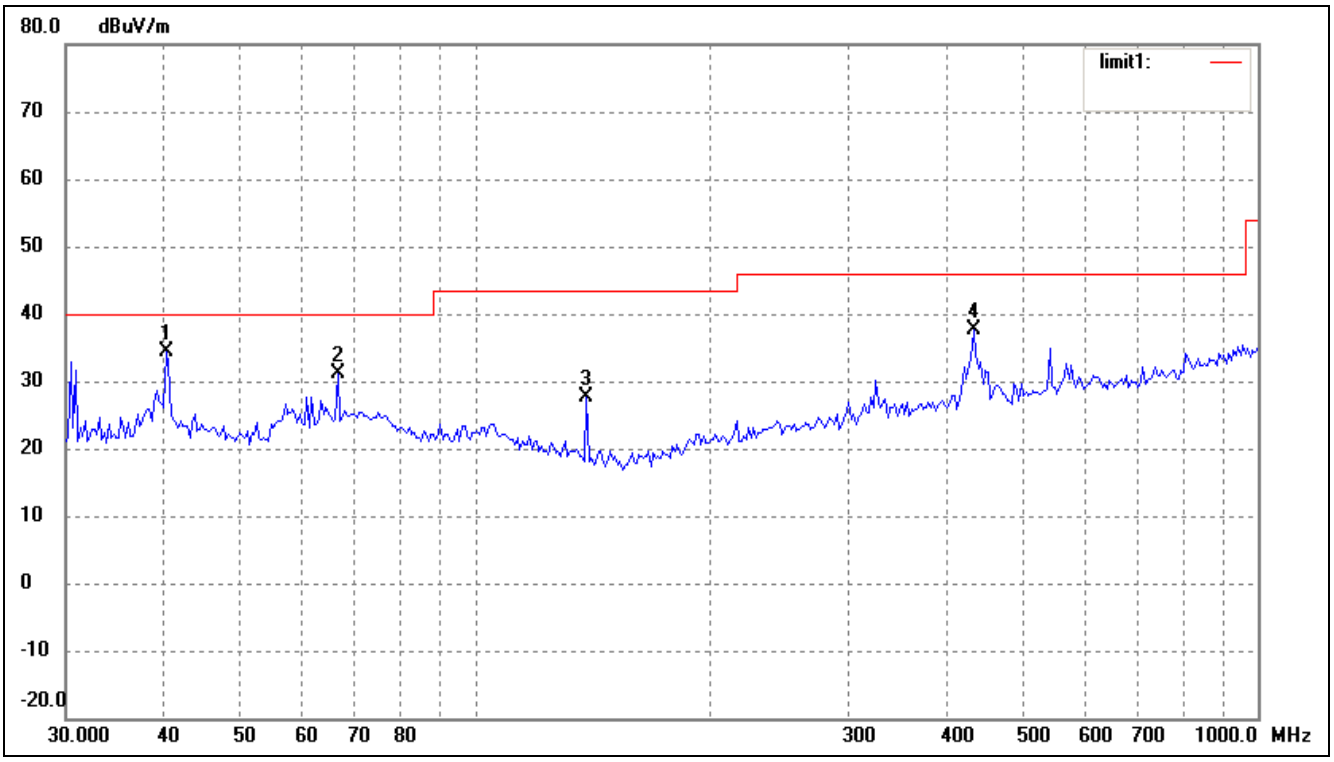
Comment: Connect to TV

Horizontal:



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	324.8645	20.66	10.09	30.75	46.00	-15.25	45	100	peak
2	433.3397	22.33	11.91	34.24	46.00	-11.76	39	120	peak
3	893.6557	20.48	16.81	37.29	46.00	-8.71	162	114	peak

Vertical:



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	40.2995	26.28	8.15	34.43	40.00	-5.57	360	120	QP
2	66.8395	26.16	4.86	31.02	40.00	-8.98	15	109	peak
3	138.8120	23.47	4.04	27.51	43.50	-15.99	26	113	peak
4	433.3397	25.66	11.91	37.57	46.00	-8.43	21	100	peak

Plot of Radiation Emissions Test Data

Radiated Emission

EUT: HDD MEDIA PLAYER

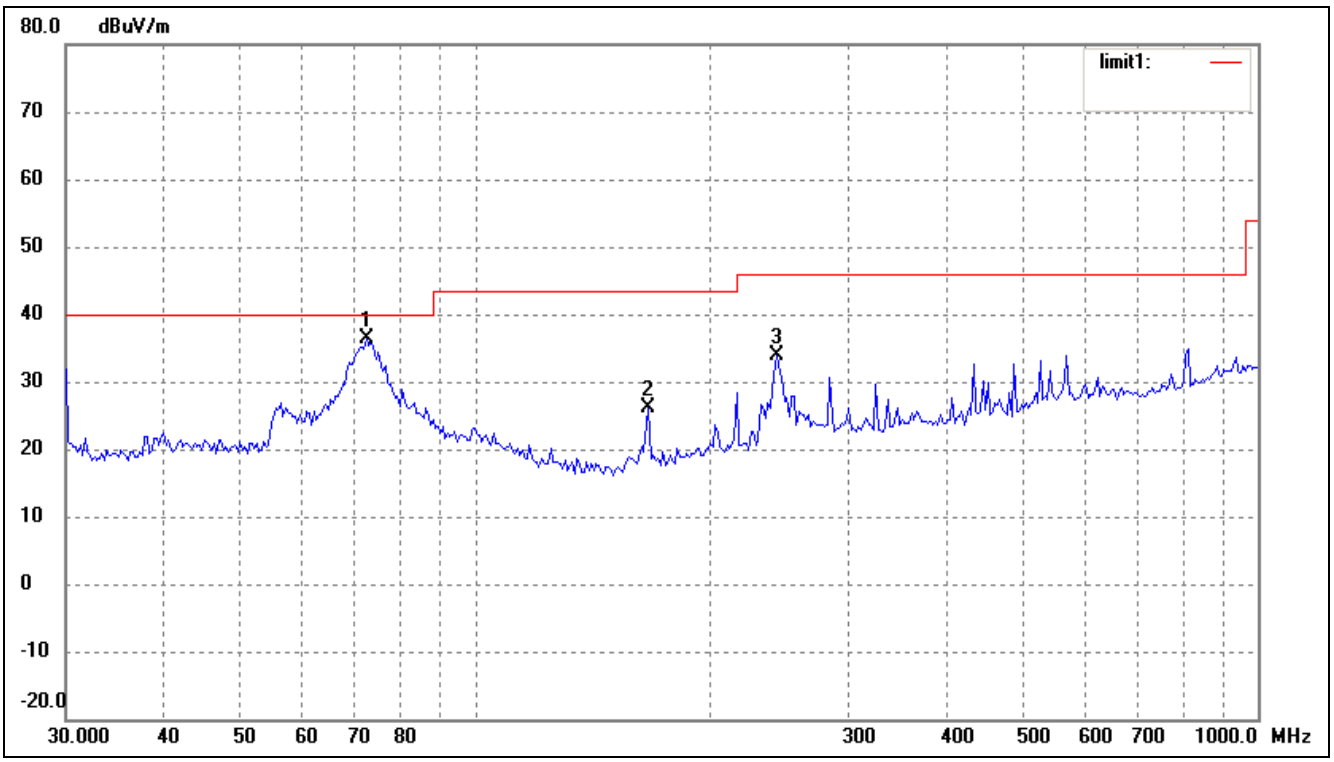
M/N: SO ROAD MOVIE

Operating Condition: Downloading

Test Specification: Horizontal & Vertical

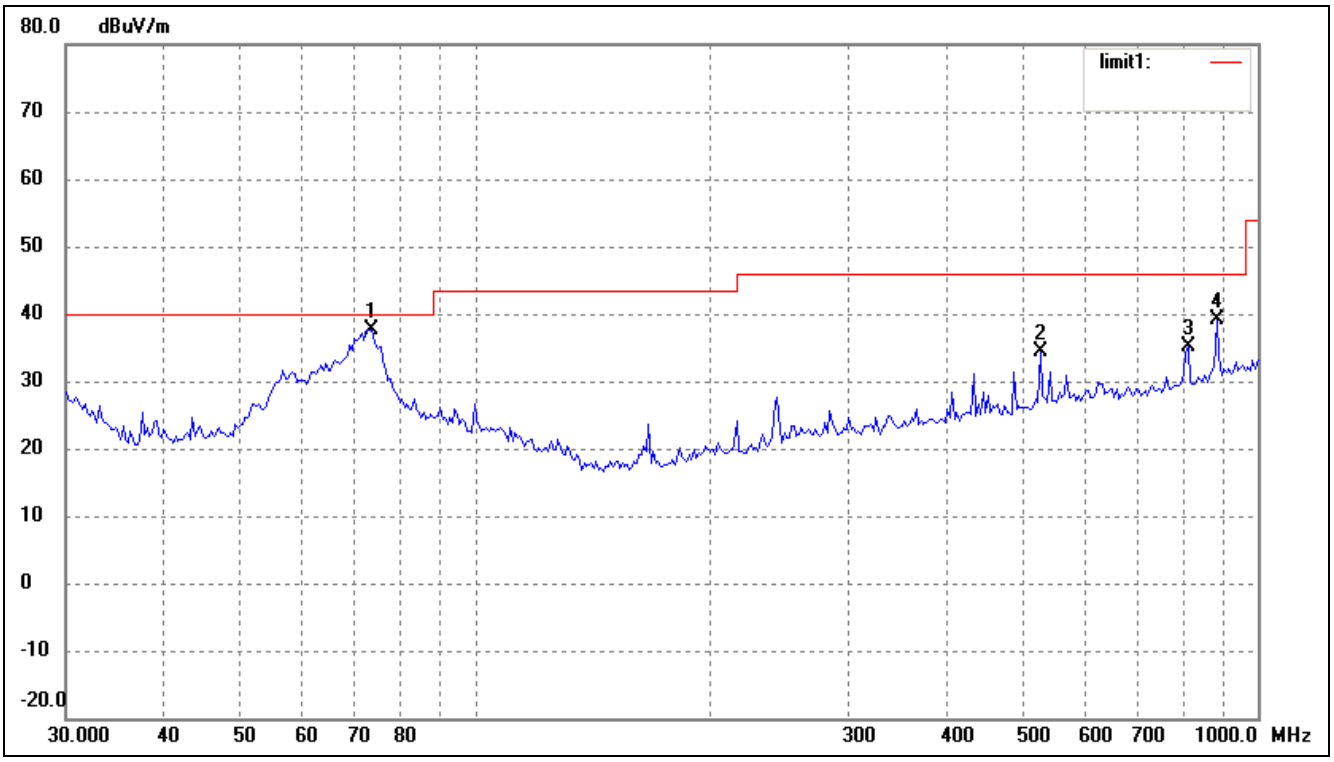
Comment: Connect to PC

Horizontal:



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	72.7203	33.15	3.20	36.35	40.00	-3.65	355	120	peak
2	166.6385	21.37	4.77	26.14	43.50	-17.36	266	111	peak
3	243.5431	25.39	8.53	33.92	46.00	-12.08	94	100	peak

Vertical:



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	73.7496	34.67	3.04	37.71	40.00	-2.29	121	104	peak
2	527.5707	21.44	12.90	34.34	46.00	-11.66	157	122	peak
3	815.6352	19.50	15.72	35.22	46.00	-10.78	78	117	peak
4	887.3978	22.37	16.72	39.09	46.00	-6.91	91	109	peak

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