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Report No.: SZEMO060400784AVB
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FCC ID: G95RS2100B

FCC Part15B Test Report

Application No.: SZEMO060400784AV

Applicant: Thomson Industry (Shenzhen) Co., Ltd.

FCC ID: G95RS2100B

Equipment Under Test (EUT):

EUT Name: audio system with 2.4G wireless*

Item No.: RS2100

*

This report is only about the USB dungle of the audio system with 2.4G wireless.

Standards: FCC PART15 SUBPART B:2006

Date of Receipt: 25 April 2006

Date of Test: 26 April to 24 June 2006

Date of Issue: 25 June 2006

Test Result :

PASS*

* In the configuration tested, the EUT complied with the standards specified above.

Robinson Lo
Laboratory Manager

This report refers to the General Conditions for Inspection and Testing Services, printed overleaf.

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the SGS PRODUCT CERTIFICATION MARK. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

All test results in this report can be traceable to National or International Standards.

Member of the SGS Group (SGS SA)



2 Test Summary

Test	Test Requirement	Test Method	Class / Severity	Result
Radiated Emission (30MHz to 1GHz)	FCC PART 15, SUBPART B: 2006	ANSI C63.4:2003	Class B	PASS
Conducted Emission (150KHz to 30MHz)	FCC PART 15, SUBPART B: 2006	ANSI C63.4:2003	Class B	PASS

The test result is only about the USB dongle of the audio system with 2.4G wireless.



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4 General Information

4.1 Client Information

Applicant: Thomson Industry (Shenzhen) Co., Ltd.
Address of Applicant: Thomson Industry (Shenzhen) Co., Ltd.

4.2 General Description of E.U.T.

EUT Name: audio system with 2.4G wireless
Item No.: RS2100
Serial No.: Not supplied by client

4.3 Details of E.U.T.

Power Supply: Supplied by PC

4.4 Description of Support Units

The EUT has been tested with a personal computer system for on mode.

Description	Manufacturer	Model No.
PC	IBM	2662
Coder	HengTong ELECTRON	HT4000
Printer	Canon	BJC-1000SP

4.5 Standards Applicable for Testing

The standard used was FCC PART 15, SUBPART B, CLASS B (2006)

4.6 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory, No.198 Kezhu Road, Science Town Economic& Technology Development District Guangzhou, China 510663

Tel: +86 20 8215 5555 Fax: +86 20 8207 5059

No tests were sub-contracted.



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4.7 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **NVLAP – Lab Code: 200611-0**
SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is recognized under the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0. Effective through December 31, 2004.
- **ACA**
SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.
- **VCCI**
The 3m Semi-anechoic chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197 and C-2383 respectively.
Date of Registration: September 29, 2005. Valid until September 28, 2008.
- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**
Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.
- **CNAL – LAB Code: L0141**
SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:1999 General Requirements) for the Competence of Testing Laboratories.
- **FCC – Registration No.: 556682**
SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen 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. Registration 556682, Aug. 04, 2005
- **Industry Canada (IC)**
The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 6002.

4.8 Deviation from Standards

None.

4.9 Abnormalities from Standard Conditions

None.

5 Equipments Used during Test

RE in Chamber					
Item	Test Equipment	Manufacturer	Serial No.	Cal.Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	SEL0017	28-04-2005	27-04-2007
2	EMI Test Receiver	Rohde & Schwarz	100249	22-09-2005	21-09-2006
3	EMI Test software	AUDIX	E3	N/A	N/A
4	Coaxial cable	SGS	SEL0028	30-05-2005	29-05-2006
5	Coaxial cable	SGS	SEL0027	30-05-2005	29-05-2006
6	BiConiLog Antenna	ETS-LINDGREN	00042673	10-01-2006	09-01-2007
7	BiConiLog Antenna	ETS-LINDGREN	00042670	10-01-2006	09-01-2007
8	Amplifier	Agilent Technologies	2944A10861	26-08-2005	25-08-2006

Conducted Emission					
Item	Test Equipment	Manufacturer	Serial No.	Cal.Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)
1	Shielding Room	ZhongYu Electron	SEL0042	N/A	N/A
2	LISN	ETS-LINDGREN	00033512	19-09-2005	18-09-2006
3	EMI Test Receiver	Rohde & Schwarz	100119	09-03-2006	08-03-2007
4	Coaxial Cable	SGS	SEL0024	31-05-2005	30-05-2006

General used equipment					
Item	Test Equipment	Manufacturer	Serial No.	Cal.Date (dd-mm-yy)	Cal.Duedate (dd-mm-yy)
1	Temperature, Humidity & Barometer	OREGON/VAISALA/ TESTO/ANDTEK	EMC0001 to EMC0004	30-08-2005	29-08-2006
2	DMM	Mastech	SEL0044	20-09-2005	19-09-2006
3	Audio	Rohde&Schwarz	100855	20-10-2005	19-10-2006



6 Test Results

6.1 Conducted Emissions Mains Terminals, 150kHz to 30MHz

Test Requirement: FCC Part15 B
Test Method: ANSI C63.4
Test Date: 9 June 2006
Frequency Range: 150KHz to 30MHz
Class / Severity: Class B
Detector: Peak for pre-scan (9kHz Resolution Bandwidth)
Quasi-Peak if maximised peak within 6dB of Quasi-Peak limit

6.1.1 E.U.T. Operation

Operating Environment:
Temperature: 24.0 °C Humidity: 52 % RH Atmospheric Pressure: 1012 Mbar
EUT Operation: Test in on mode connected with PC system.

6.1.2 Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

The following Quasi-Peak and Average measurements were performed on the EUT on 14 June 2006:

Frequency (MHz)	Cable Loss (dB)	LISN Factor (dB)	Read Level (dBuV)	Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Remark
0.165	-0.03	-0.04	33.32	33.25	65.21	-31.96	QP
0.165	-0.03	-0.04	26.56	26.49	55.21	-28.72	Average
0.252	-0.04	-0.04	31.23	31.15	61.69	-30.54	QP
0.252	-0.04	-0.04	35.62	35.54	51.69	-16.15	Average
0.369	0.00	-0.04	34.65	34.61	58.52	-23.91	QP
0.369	0.00	-0.04	25.32	25.28	48.52	-23.24	Average
0.590	0.00	-0.04	21.25	21.21	56.00	-34.79	QP
0.590	0.00	-0.04	16.32	16.28	46.00	-29.72	Average
1.630	0.10	-0.06	21.25	21.29	56.00	-34.71	QP
1.630	0.10	-0.06	15.32	15.36	46.00	-30.64	Average
2.360	0.10	-0.07	19.65	19.68	56.00	-36.32	QP
2.360	0.10	-0.07	13.36	13.39	46.00	-32.61	Average



6.2 Radiated Emissions, 30MHz to 1GHz

Test Requirement: FCC Part15 B
Test Method: ANSI C63.4
Test Date: 15 June 2006
Frequency Range: 30MHz to 1GHz
Measurement Distance: 3m
Class: Class B
Limit: 40.0 dB μ V/m between 30MHz & 88MHz
43.5 dB μ V/m between 88MHz & 216MHz
46.0 dB μ V/m between 216MHz & 960MHz
54.0 dB μ V/m above 960MHz
Detector: Peak for pre-scan (120kHz resolution bandwidth)
Quasi-Peak if maximised peak within 6dB of limit

6.2.1 E.U.T. Operation

Operating Environment:
Temperature: 24.0 °C Humidity: 52 % RH Atmospheric Pressure: 1012 mbar

EUT Operation: Test in on mode connected with PC system.

6.2.2 Measurement Data

An initial pre-scan was performed in the 3m chamber using the spectrum analyser in peak detection mode. The EUT was measured by Bilog antenna with 2 orthogonal polarities and peak emissions from the EUT were detected within 6dB of the class B limit line.

The following quasi-peak measurements were performed on the EUT on 14 June 2006:

Horizontal.

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dB μ V)	Level (dB μ V/m)	Limit Line (dB μ V/m)	Over Limit (dB)
49.400	0.79	8.67	28.11	34.94	16.29	40.00	-23.71
67.830	0.80	6.96	28.01	35.16	14.91	40.00	-25.09
95.960	1.16	8.95	27.91	35.56	17.76	43.50	-25.74
186.170	1.38	10.02	27.23	36.28	20.45	43.50	-23.05
391.810	2.18	16.20	27.35	32.12	23.15	46.00	-22.85
655.650	2.82	20.84	27.42	32.57	28.81	46.00	-17.19

Vertical.

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dB μ V)	Level (dB μ V/m)	Limit Line (dB μ V/m)	Over Limit (dB)
44.500	0.70	9.66	28.10	33.90	16.16	40.00	-23.84
74.725	0.95	7.30	28.00	33.38	13.63	40.00	-26.37
131.275	1.28	7.76	27.59	33.61	15.06	43.50	-28.44
197.575	1.40	10.17	27.17	33.97	18.37	43.50	-25.13
381.850	2.15	16.08	27.30	31.25	22.18	46.00	-23.82
655.825	2.82	20.84	27.42	30.40	26.64	46.00	-19.36