SGS-CSTC Standards Technical Services
(Shanghai) Co., Ltd.

588 West Jindu Road,Songjiang District,Shanghai,China
Telephone: +86 (0) 21 6191 5666
Fax: +86 (0) 21 6191 5678
ee.shanghai@sgs.com

1 Cover Page

FCC MPE REPORT

Application No.:	SHEM1309001824RF
Applicant:	Hansong (Nanjing) Technology Ltd.
FCC ID:	XCO-SOUNDBAR2
IC ID:	7756A-SOUNDBAR2
Equipment Under Test (EUT): **NOTE:** The following sample(s) submitted was/were identified on behalf of the client as	
Product Name:	Soundtrack 2 System
Model No.(EUT):	Soundtrack 2
Standards:	FCC Rules 47 CFR §2.1093 KDB447498 D01 General RF Exposure Guidance
Date of Receipt:	September 12, 2013
Date of Test:	September 13, 2013 to September 26, 2013
Date of Issue:	October 11, 2013
Test Result:	**Pass***

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

Tony Wu
E&E Section Manager
SGS-CSTC (Shanghai) Co., Ltd.

2 Version

Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
00	/	October 11, 2013	/	Original

Authorized for issue by:				
Engineer		Eddy Zong **Print Name**		
Clerk		Susie Liu **Print Name**		
Reviewer		Keny Xu **Print Name**		

3 Contents

Page

4 General Information

4.1 Client Information

Applicant:	Hansong (Nanjing) Technology Ltd.
Address of Applicant:	8th Kangping Road, Jiangning Economy and Technology Development Zone, Nanjing, 211106, China
Manufacturer:	Not supplied by the client.
Address of Manufacturer:	Not supplied by the client.
Factory:	Not supplied by the client.
Address of Factory:	Not supplied by the client.

4.2 General Description of E.U.T.

Product Name:	Soundtrack 2 System
Model No.(EUT):	Soundtrack 2
Product Description:	Portable Product

4.3 Details of E.U.T.

Operation Frequency:		BT:2402MHz~2480MHz DTS: 2412MHz~2464MHz
Bluetooth Version:		3.0+EDR
Modulation Technique:		BT: GFSK, π/4DQPSK, 8DPSK DTS: QPSK
Number of Channel:		BT: 79 DTS: 3
Antenna Type		BT: Plug-in antenna DTS: Integral (The WiFi modular contains two antennas, but the two antennas couldn't simultaneous working.)
Antenna Gain		BT: 2 dBi DTS: 1.5dBi
Adapter:	Manufacturer:	GOLDEN PROFIT ELECTRONICS LTD.
	Model No.:	GPE060D-200250D
	Rated Input:	100-240V AC 50/60Hz, 1.5A
	Rated Output:	20V DC 2500mA
	Cable length:	AC port: About 150cm Length DC port: About 170cm Length
Engineering Mode:		Using test software to control EUT working in continuous transmitting, and select channel and modulation type

4.4 Test Location

All tests were performed at SGS E&E EMC lab
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.
No.588 West Jindu Road, Songjiang District, Shanghai, China. 201612.
Tel: +86 21 6191 5666 Fax: +86 21 6191 5678

4.5 Test Facility

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

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing. Date of expiry: 2014-07-26.

- **FCC – Registration No.: 402683**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered and fully described in a report filed with the Federal Communications Commission (FCC). The acceptance letter from the FCC is maintained in our files. Registration No.: 402683, Expiry Date: 2015-02-22.

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A. Expiry Date: 2014-09-20.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-3868 and C-4336 respectively. Date of Registration: 2012-05-29. Date of Expiry: 2015-05-28.

5 Test Standards and Limits

According to§1.1310 Radiofrequency radiation exposure limits:

The limit for general population/uncontrolled exposures

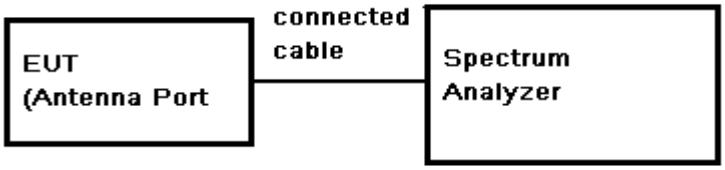
Frequency	Power density(mW/cm^2)	Averaging time(minutes)
300MHz~1.5GHz	f/1500	30
1.5GHz~100GHz	1.0	30

6 Measurement and Calculation

6.1 Maximum transmit power

EUT Operation: Test in fixing frequency operating mode at lowest, middle and highest frequency.

Test Configuration:



Test Results record:

For BT:

Test mode	Channel	Reading Peak Power (dBm)	Cable Loss (dB)	Output Peak Power (dBm)	Output Peak Power (mW)	Peak Power Limit (dBm)	Result
GFSK	Low	-1.65	0.5	-1.15	0.767361	30	PASS
	Mid	-1.78	0.5	-1.28	0.744732	30	PASS
	High	-2.33	0.5	-1.83	0.656145	30	PASS
π/4DQPSK	Low	-1.77	0.5	-1.27	0.746449	30	PASS
	Mid	-1.08	0.5	-0.58	0.874984	30	PASS
	High	-1.16	0.5	-0.66	0.859014	30	PASS
8DPSK	Low	-1.42	0.5	-0.92	0.809096	30	PASS
	Mid	-0.83	0.5	**-0.33**	**0.926830**	30	PASS
	High	-1.33	0.5	-0.83	0.826038	30	PASS

For DTS:

Test mode	Channel	Reading Peak Power (dBm)	Cable Loss (dB)	Output Peak Power (dBm)	Output Peak Power (mW)	Peak Power Limit (dBm)	Result
Antenna A	Low	15.69	0.5	16.19	41.59	30	PASS
	Mid	15.85	0.5	16.35	43.15	30	PASS
	High	16.02	0.5	16.52	44.87	30	PASS
Antenna B	Low	16.47	0.5	16.97	49.77	30	PASS
	Mid	16.54	0.5	17.04	50.58	30	PASS
	High	16.69	0.5	**17.19**	**52.36**	30	PASS

6.2 MPE Calculation

According to the formula S= $\frac{PG}{4R^2\pi}$, we can calculate S which is MPE.

Note:

1) P (Watts) =Power Input to antenna = $10^{\frac{dBm}{10}}$ / 1000

2) G (Antenna gain in numeric) = 10^ (Antenna gain in dBi /10)

3) R = distance to the center of radiation of antenna (in meter) = 20cm

4) MPE limit = 1mW/cm²

For BT:

The Max Conducted Peak Output Power is 0.93mW in middle channel of 8DPSK;

The best case gain of the antenna is 2dBi. 3dB logarithmic terms convert to numeric result is nearly 1.58

So, S= $\frac{PG}{4R^2\pi} = \frac{0.93\times1.58}{4\times400\times3.14}$ =0.0003 mW/cm^2

For DTS:

The Max Conducted Peak Output Power is 52.36mW in highest channel;

The best case gain of the antenna is 1.5dBi. 3dB logarithmic terms convert to numeric result is nearly 1.41

So, S= $\frac{PG}{4R^2\pi} = \frac{52.36\times1.41}{4\times400\times3.14}$ =0.0147 mW/cm^2

The BT and the DTS modules can simultaneous transmitting at frequency 2.4GHz band.But the maximum rate of MPE is $\frac{0.0003}{1.0}+\frac{0.0147}{1.0}$ =0.0150<=1.0. according to the KDB447498 D01 section 7.2 determine the device is exclusion from SAR test.

7 EUT Constructional Details

Refer to the < Soundtrack 2_External Photos > & < Soundtrack 2_Internal Photos>.

--End of the Report--