

# *MESSRS*

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## SPECIFICATION FOR APPROVAL

## 承 認 書

Product	DYNAMIC SPEAKER
Part No.	AK-402808BC-3T-LF (RoHS)
Customer Approval	

Approved By	Checked By	Made By
工程部 王台平 JAN-06-2006	工程部 劉民祥 JAN-06-2006	工程部 許俊程 JAN-06-2006



**ADVANCED ACOUSTIC TECHNOLOGY CORP.**

**苙 翔 科 技 股 份 有 限 公 司**



ISO 9001 Certified

2F, No.207, Sec. 6, Chung Shan N. Rd., Taipei, Taiwan.

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Fax: +886-2-88665250

e : <http://www.aatc.com.tw>

# 1. SPECIFICATION

AK-402808BC-3T-LF

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 40 x 28.3 mm	
03	Rated Input Power	2.0 W	
04	Max. Input Power	4.0 W	
05	Impedance	8 ohm $\pm$ 15% at 1500Hz	
06	Resonance Frequency (Fo)	530 Hz $\pm$ 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	78dB(W/m) $\pm$ 3 dB	at AVE 0.8K,1.0K,1.2K,1.5K(Hz).
		101dB(2W/0.1m) $\pm$ 3 dB	
08	Frequency Range	Fo – 16.5KHz	
09	Distortion	Max. 8 % at 1K Hz ,2.0 W.	
10	Voice Coil	Diameter 13.3 mm	
11	Magnet	Rare earth permanent (Nd-Fe-B) magnet $\Phi$ 12.5 x 2.5mm	
12	Weight	11g $\pm$ 1g	
13	Appearance	Should not exist any obstacle to be harmful to normal operation; damages, cracks, rusts and distortions, etc.	
14	Operation Test	Must be normal at program source –2.0W	
15	Buzz, Rattle, etc.	Should not be audible at 4.0V sine Wave between Fo to 20KHz	
16	Polarity	When positive voltage is applied to the terminal marked (+), diaphragm should move to the front.	
17	Terminal Strength	Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection.	
18	Temperature	Operating temperature: -20°C to +60°C	
		Storage temperature: -30°C to +70°C	

## 2. MEASURING METHOD

### 2-1 .Test Condition

#### STANDARD

Temperature : 15 ~ 35°C

Relative humidity : 45% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

#### JUDGEMENT

Temperature : 20±3°C

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

### 2-2 . Standard Test Fixture

1.Input Power : 2.0W(4.0V)

2.Zero Level : -dB

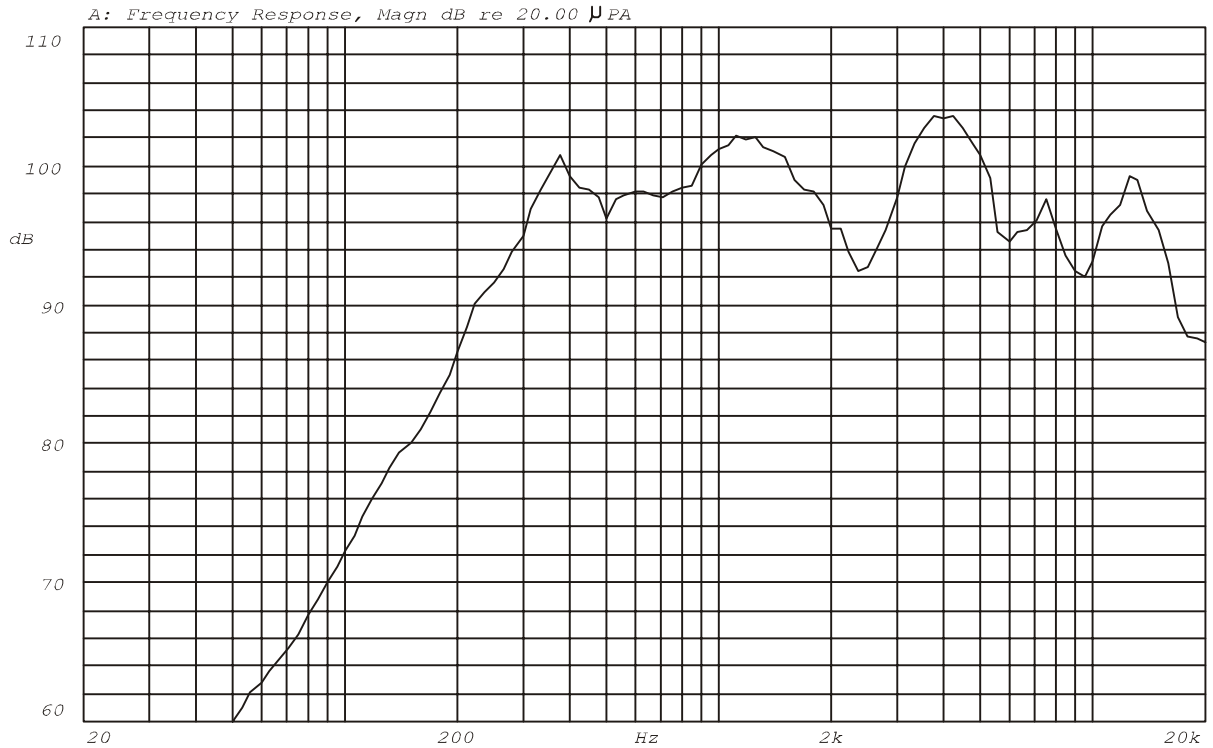
3.Mode : SPEAKER

4.potentiometer Range : 50dB

5.Sweep Time : 0.5sec



## 2-3. Frequency Response Curve

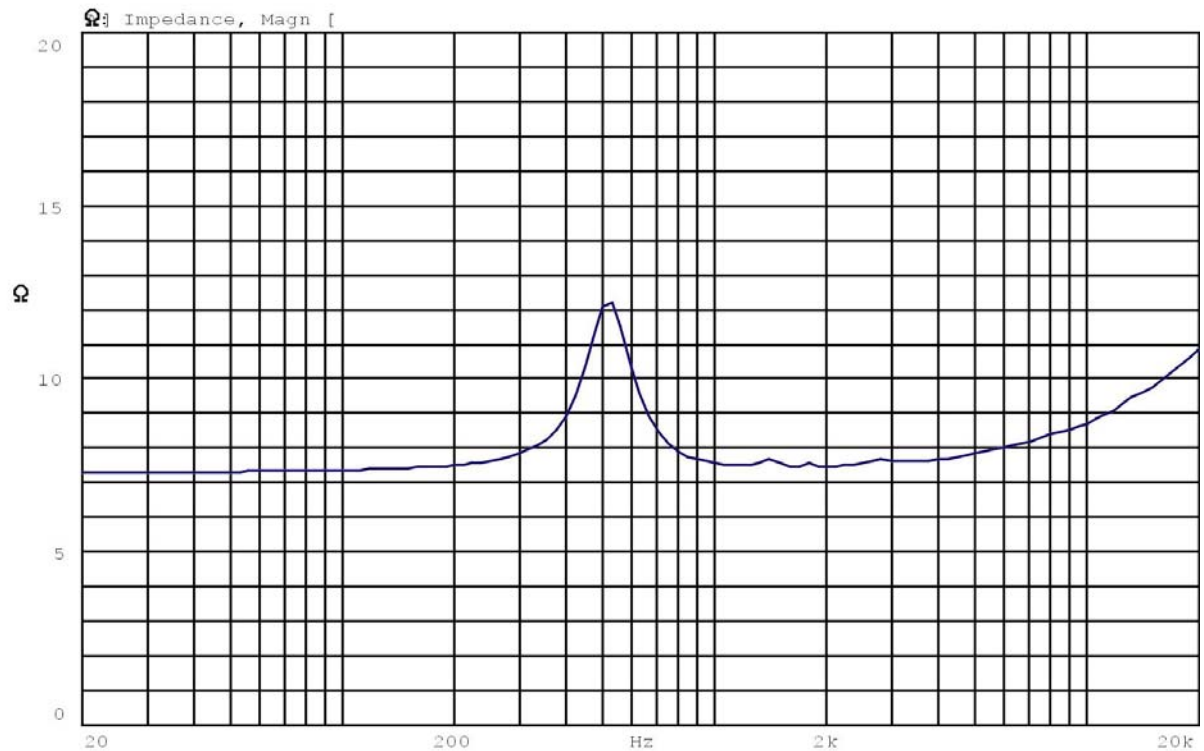


Mode: SPEAKER



## 2-4. Impedance Curve

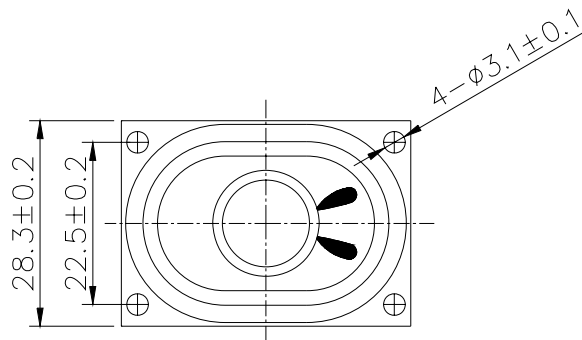
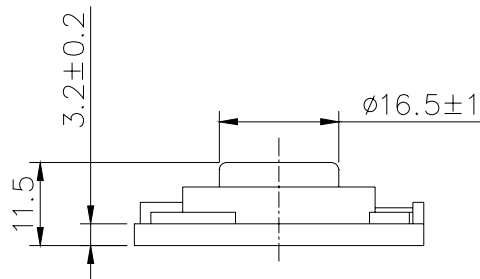
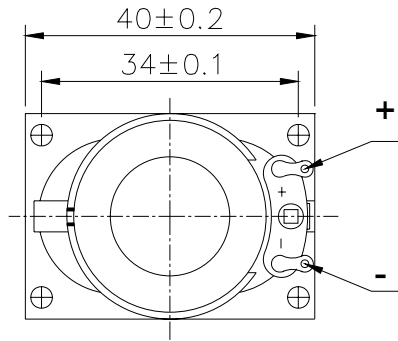
IMPEDANCE MEASUREMENTS: Measurement of Impedance Z(jw)  
X: Y: ZA:2.0000 No Curve



Mode: Z(jw)



REV NO.	REVISION NOTE	APPROVAL	DATE
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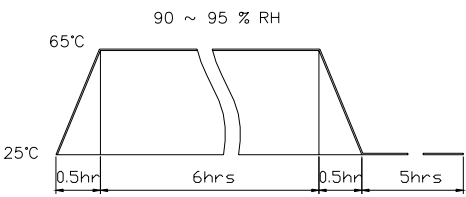


TITLE:	DYNAMIC SPEAKER	DRAWN:	JOHN 08/03/2004	SCALE:	1:1	SHEET:	1 of 1
PART NO.	AK-402808BC-3T-LF	DESIGNED:	R & D OF AAT	UNITS:	mm		
DWG NO.	DTS-1390	CHECKED:		TOLERANCE	± 0.5		
		APPROVAL:		UNLESS OTHERWISE SPECIFIED:	ONE PLACE DECIMAL ± ***		
		REV	1	TWO PLACE DECIMAL ± ***			
		MATERIAL:	*****	THREE PLACE DECIMAL ± ***			



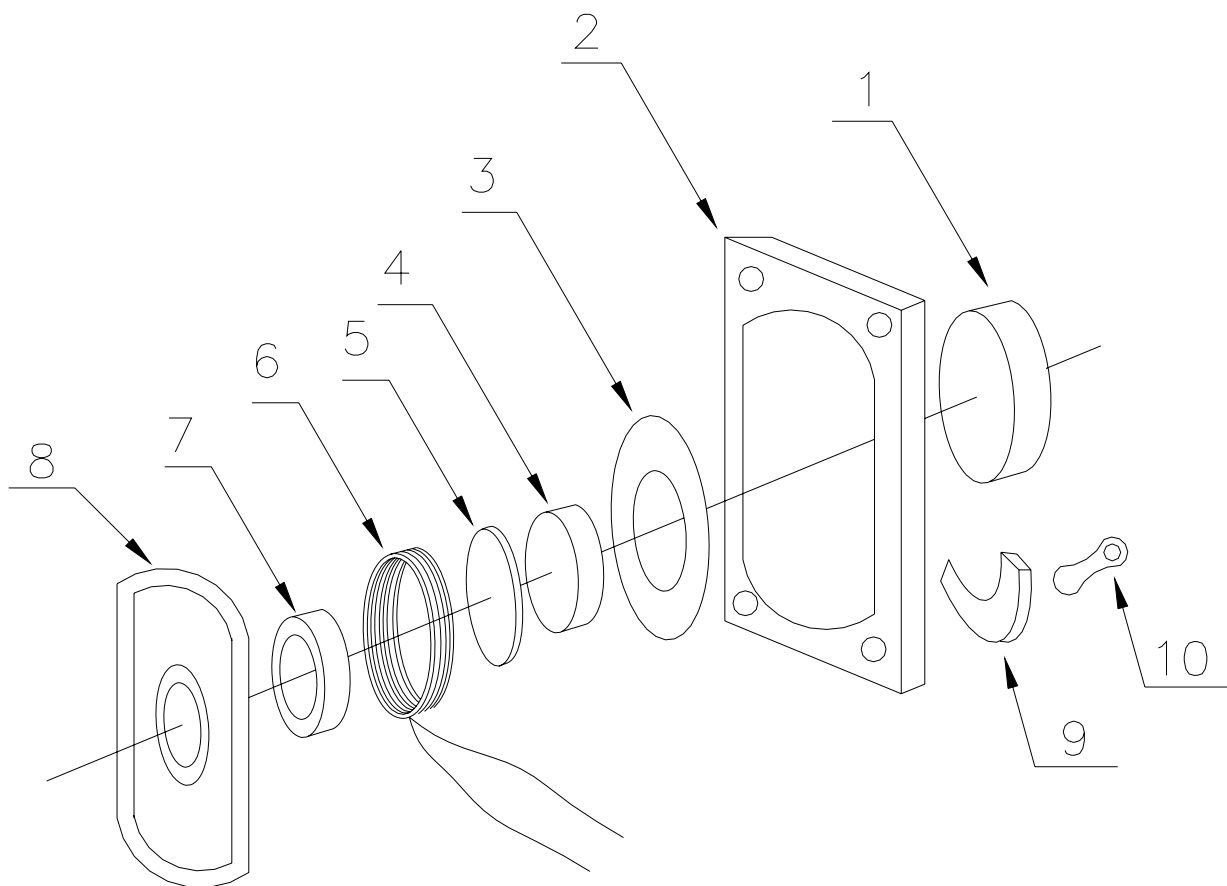
苙翔科技股份有限公司  
ADVANCED ACOUSTIC TECHNOLOGY CORPORATION

### 3. RELIABILITY TESTS

Items.		Specifications
01	High temp. Test	Keep 96 hours at $+70^{\circ}\text{C}\pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
02	Low temp. Test	Keep 96 hours at $-20^{\circ}\text{C}\pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
03	Humidity test	Keep 96 hours at $+60^{\circ}\text{C}\pm 3^{\circ}\text{C}$ relative humidity 95% and leave 3 hours in normal temperature and then checked.
04	Temp./Humidity cycle	<p>The part shall be subjected 5 cycles. One cycle shall be 12 hours and consist of;</p> 
05	Thermal cycle test.	Low temperature: $-40^{\circ}\text{C}\pm 3^{\circ}\text{C}$ , temperature: $+70^{\circ}\text{C}\pm 3^{\circ}\text{C}$ , cycle: 1 hour/cycle each, and then keep 5 cycles in a room.
06	Vibration	10~200~10Hz sin-wave sweep 15min. 5G(constant) X,Y, Z 3 direction. 2 hours each, total 6 hours.
07	Fix drop test	Fix on jig. Then drop from 152cm height to the concrete floor X,y, z 6 direction. 5 times each, total 30 times.
08	Free drop test	Free drop from 100cm height to the concrete floor X,y, z 6 direction. 1 times each, total 6 times.
09	Load test	Rated Power white noise is applied for 96 hours
10	Max Power test	Max power 1 min on – 1 min off 10 cycles.
11	Terminal strength test	Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection.
<p>CRITERION :</p> <p>After these test , the change of S.P.L shall be within <math>\pm 3</math> dB .</p>		

# SPEAKER RoHS REPORT Approval By SGS

NO	PART NAME	MATERIAL	APPROVAL NO.	PAGE
1	COVER	Fe	GZSCR040934664	8
2	FRAME	ABS	2008870	9
3	DAMPER	CLOTH	2021547	10
4	MAGNET	NdFeB	SH402661	11
5	WASHER	METAL	SZTYR050307393	12
6	COIL	Cu	50529	13
7	TUBE	PAPER	GZSCR041144722	14
8	DIAPHRAGM	PAPER	SZTYR050412388	15
9	BOARD	PAPER	GZSCR050103219 2003505	16 17
10	TERMINAL	Fe	GZSCR050105255	18
11	SOLDER	Sn	SH508388	19





**Test Report**

No.: GZSCR040934664/LP

Date: SEP 27, 2004

Page 1 of 1

YIYANG ELECTRONICS FITTINGS CO., LTD  
SHIJIE TOWN, DONGGUAN CITY, GUANGDONG PROVINCE

Report on the submitted sample said to be 喇叭五金—铁件

SGS Ref No. : SZ040911093EC-3.1  
Buyer : SONY  
Sample Receiving Date : SEP 21, 2004  
Testing Period : SEP 21, 2004 TO SEP 27, 2004

Test Requested : As specified by client, to determine the Lead, Cadmium, Mercury & Hexavalent Chromium content in the submitted sample.

Test Method : Lead content - In-house method, with reference to EPA method 3050B: 1996.  
Cadmium content - In-house method, with reference to BS EN1122: 2001 method B.  
Mercury content - In-house method, with reference to EPA 3052: 1996.  
Hexavalent Chromium content - with reference to EPA 3060A & EPA 7196A.  
Analysis was performed by Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES) / UV-VIS Spectrophotometer.

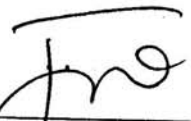
**RESULTS**

	Silvery metal part
Lead Content (Pb) (ppm)	9
Cadmium Content (Cd)	N.D.
Mercury Content (Hg)	N.D.
Hexavalent Chromium Content [Cr(VI)]	N.D.

Note : - N.D. = Not Detected (< 2 ppm)  
- ppm = mg/kg

\*\*\* End of Report \*\*\*

Signed for and on behalf of  
SGS-CSTC Ltd.

  
He Xiaoyan, Jane  
Tech. Manager

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GZCM 127041



Test Report

No. 2008870/EC

Date : Dec 15 2004

Page 1 of 1

Report on the submitted samples said to be 塑膠部品 (ABS).

Test Results

Element	Black Plastic
1) Cadmium (Cd)	< 2 ppm
2) Lead (Pb)	4 ppm
3) Mercury (Hg)	< 2 ppm
4) Hexavalent Chromium (Cr <sup>6+</sup> )	< 2 ppm

(Results shown are of the total weight of samples)

Note : < = Less than  
ppm = mg/kg

5)

Flame Retardants	Black Plastic	Detection Limit
<b>Polybrominated Biphenyls (PBBs)</b>	---	---
Monobromobiphenyl	ND	5 ppm
Dibromobiphenyl	ND	5 ppm
Tribromobiphenyl	ND	5 ppm
Tetrabromobiphenyl	ND	5 ppm
Pentabromobiphenyl	ND	5 ppm
Hexabromobiphenyl	ND	5 ppm
Heptabromobiphenyl	ND	5 ppm
Octabromobiphenyl	ND	5 ppm
Nonabromobiphenyl	ND	5 ppm
Decabromobiphenyl	ND	5 ppm
<b>Polybrominated Diphenylethers (PBDEs)</b>	---	---
Monobromodiphenyl ether	ND	5 ppm
Dibromodiphenyl ether	ND	5 ppm
Tribromodiphenyl ether	ND	5 ppm
Tetrabromodiphenyl ether	ND	5 ppm
Pentabromodiphenyl ether	ND	5 ppm
Hexabromodiphenyl ether	ND	5 ppm
Heptabromodiphenyl ether	ND	5 ppm
Octabromodiphenyl ether	ND	5 ppm
Nonabromodiphenyl ether	ND	5 ppm
Decabromodiphenyl ether	ND	5 ppm

Note: ND = Not Detected  
Non-detected is lower than detection limit value.

\*\*\* End of Report \*\*\*

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H11401079

DONG GUAN LIEN KUN INDUSTRIAL CO., LTD.  
BUL 3, SHI JING INDUSTRIAL,  
PARK FUCHENG DONGGUAN,  
GUANGDONG,  
CHINA

Report on the submitted sample said to be 棉布, 絹布, 防火布.

SGS Job No. : 1755039  
SGS Ref. No. : SZTYR050413703/LP  
Supplier : DONG GUAN LIEN KUN INDUSTRIAL CO.,LTD  
Sample Receiving Date : MAY 01 2005  
Testing Period : MAY 01-12 2005

### Test Results :

Element	1
1) Cadmium (Cd)	< 2 ppm
2) Lead (Pb)	6 ppm
3) Mercury (Hg)	< 2 ppm
4) Hexavalent Chromium (Cr <sup>6+</sup> )	< 2 ppm

(Results shown are of the total weight of samples)

Note : < = Less than  
ppm = mg/kg

5)

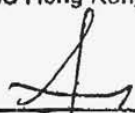
Flame Retardants	1	Detection Limit
<b>Polybrominated Biphenyls (PBBs)</b>	---	---
Monobromobiphenyl	ND	5 ppm
Dibromobiphenyl	ND	5 ppm
Tribromobiphenyl	ND	5 ppm
Tetrabromobiphenyl	ND	5 ppm
Pentabromobiphenyl	ND	5 ppm
Hexabromobiphenyl	ND	5 ppm
Heptabromobiphenyl	ND	5 ppm
Octabromobiphenyl	ND	5 ppm
Nonabromobiphenyl	ND	5 ppm
Decabromobiphenyl	ND	5 ppm
<b>Polybrominated Diphenylethers (PBDEs)</b>	---	---
Monobromodiphenyl ether	ND	5 ppm
Dibromodiphenyl ether	ND	5 ppm
Tribromodiphenyl ether	ND	5 ppm
Tetrabromodiphenyl ether	ND	5 ppm
Pentabromodiphenyl ether	ND	5 ppm
Hexabromodiphenyl ether	ND	5 ppm
Heptabromodiphenyl ether	ND	5 ppm
Octabromodiphenyl ether	ND	5 ppm
Nonabromodiphenyl ether	ND	5 ppm
Decabromodiphenyl ether	ND	5 ppm

Note: ND = Not Detected  
Non-detected is lower than detection limit value.

### Sample Description:

1. Brown-Red Fabric + Lt. Brown Fabric + Beige Fabric

Signed for and on behalf of  
SGS Hong Kong Ltd

  
Lee Fung Mei, Miranda  
Senior Manager





**Test Report**

No. SH402661/CHEM

Date: 3.1.2004

Page 1 of 1

DONGYANG BOJIAN STRONGMAG CO., LTD  
HEFENGJIAN INDUSTRY AREA, DONGYANG CITY, ZHEJIANG P.R.CHINA

The following sample(s) was/were submitted and identified on behalf of the applicant as:

Sample Description : NdFeB MAGNET  
SGS Ref No. : SHEC0040201061-1

Sample Receiving Date : February 25, 2004  
Testing Period : February 25 to March 01, 2004

Test Requested : To determine the Cadmium, Lead, Mercury and Hexavalent Chromium Content of the submitted samples.

Test method : In-house Method, Analysis was performed by Inductively Coupled Argon Plasma Spectrometry or Atomic Absorption Spectrometry.  
Hexavalent Chromium :With reference to US EPA3060A and US EPA7196A

Test Results :

Element	A
Cadmium (Cd)	N.D.
Lead (Pb)	N.D.
Mercury (Hg)	N.D.
Hexavalent Chromium (Cr VI)	N.D.

(Result shown is of the total weight of sample)

Sample Description:  
A. Silvery & grey metal

Note : ppm = mg/kg  
N.D. = Non-detected (Cd Detection limit <5.0 ppm; Hg, Cr VI Detection limit <2.0 ppm)

\*\*\* End of Report \*\*\*

Signed for and on behalf of  
SGS ASTIC Chemical Laboratory



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SHCH 116956

## Test Report

No.: SZTYR050307393/LP

Date: MAR 24, 2005

Page 1 of 1

RONG XING ACOUSTIC SPARE PART  
FENG SHAN DISTILLERY FACTORY  
No. 345, TANG KEN RD.,  
FENG SHUN DISTILLERY,  
FENG SHUN, MEI ZHOU,  
GUANGDONG, CHINA



Report on the submitted sample said to be 铁材部品

SGS Ref. No. : 050303788EC-2.1  
Sample Receiving Date : MAR 16, 2005  
Testing Period : MAR 18, 2005 TO MAR 23, 2005

Test Requested : To determine the Lead, Cadmium, Mercury &amp; Hexavalent Chromium content in the submitted sample.

Test Method : Lead, Cadmium & Mercury content - In-house method.  
Hexavalent Chromium content - with reference to EPA Method 3060A: 1996 / other wet digestion.  
Analysis was performed by Atomic Absorption Spectrometer (AAS), Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES) and UV-VIS Spectrophotometer.

### Results

	Colorful metal part
Lead Content (ppm)	39
Cadmium Content	N.D.
Mercury Content	N.D.
Hexavalent Chromium Content	N.D.

Note: - N.D. = Not Detected (< 2 ppm)  
- ppm = mg/kg  
- Results shown are of the total weight of dry sample.

\*\*\* End of Report \*\*\*

Signed for and on behalf of  
SGS-CSTC Ltd.

Zhang Yanzheng, Helen  
Section Manager

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SZL 315869

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Test Laboratory

2/F, 4/F, 5/F, Dastar Building, Zhongkang Road, Shangmeilin, Shenzhen China 518049 t (86-755)83114358 f (86-755)83106190 43118634 [www.cn.sgs.com](http://www.cn.sgs.com)

Member of SGS Group (Société Générale de Surveillance)

25/03 2005 FRI 11:54 ITX/RX NO 79241 002



鄧麗君 廖利軍

# Test Report

名稱: 萊昆銅線SGS檢驗報告 W4-003

JUNG SHING WIRE CO., LTD.  
231, SEC. 3, CHUNG-CHENG RD., JEN-TEH  
HSIANG, TAINAN HSIEN, 717 TAIWAN

Report No : CE/2004/50529  
Date : 2004/05/14  
Page : 1 of 2

The following merchandise was(were) submitted and identified by the client as :

Type of Product : POLYURETHANE WITH SELF-BONDING OVERCOAT ENAMELLED COPPER WIRE  
 Style/Item No : LOCK  
 Buyer/Order No : CUSTOMER OF JUNG SHING WIRE CO., LTD.  
 Sample Received : 2004/05/06.  
 Testing Date : 2004/05/06 TO 2004/05/14

Test Item(s)	Unit	Method	MDL	Result				Spec.
				NO.1				
94/62/EEC								
Cadmium (Cd)	ppm	ICP-AES After As per EN 1122, Method B:2001 or other acid digestion.	2	N.D.				
Lead (Pb)	ppm	ICP-AES After As per US EPA 3050B or other acid digestion.	2	N.D.				
Mercury (Hg)	ppm	ICP-AES After As per US EPA 3052 or other acid digestion.	2	N.D.				
Chromium VI (Cr+6)	ppm	As per US EPA 7196A and US EPA 3060A.	2	N.D.				
Total Lead+Cadmium+Mercury+Chromium VI	ppm	Total Lead+Cadmium+Mercury+Chromium VI (94/62/EEC)	-	N.D.				100

- NOTE: (1) N.D. = Not detected (<MDL)  
 (2) ppm = mg/kg  
 (3) MDL= Method Detection Limit  
 (4) " --- " = Not Applicable  
 (5) " - " = Not Regulation  
 (6) \* = Results shown are of the adjusted analytical results.  
 (7) \*\* = Qualitative analysis(No Unit)  
 (8) Negative = Undetectable / Positive = Detectable.

  
 Daniel Yeh, M.P., Operation Manager  
 Signed for and on behalf of  
 SGS TAIWAN LTD.

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0757995



Test Report

No.: GZSCR041144722/LP

Date: NOV 26, 2004

Page 1 of 1

Results :

紙管

Brown paper tube

Lead [Pb]	< 2
Cadmium [Cd]	< 2
Mercury [Hg]	< 2
Hexavalent Chromium [Cr(VI)]	< 2
Total [Pb + Cd + Cr(VI) + Hg]	< 8
Total Limit	100

Flame Retardants	Brown paper tube	Detection Limit (ppm)
<b>Polybrominated Biphenyls (PBBs)</b>		
Monobromobiphenyl	ND	5
Dibromobiphenyl	ND	5
Tribromobiphenyl	ND	5
Tetrabromobiphenyl	ND	5
Pentabromobiphenyl	ND	5
Hexabromobiphenyl	ND	5
Heptabromobiphenyl	ND	5
Octabromobiphenyl	ND	5
Nonabromodiphenyl	ND	5
Decabromodiphenyl	ND	5
<b>Polybrominated Diphenylether (PBDEs)</b>		
Monobromodiphenyl ether	ND	5
Dibromodiphenyl ether	ND	5
Tribromodiphenyl ether	ND	5
Tetrabromodiphenyl ether	ND	5
Pentabromodiphenyl ether	ND	5
Hexabromodiphenyl ether	ND	5
Heptabromodiphenyl ether	ND	5
Octabromodiphenyl ether	ND	5
Nonabromodiphenyl ether	ND	5
Decabromodiphenyl ether	ND	5

Note: ND = Not Detected  
Non-detected is lower than detection limit value.

副理

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GZCM 173903

4/F, Block A, Yu Jing Industrial Park, Ling Shm Road, Zhu Cun Dong Pu Area, Tianhe District, Guangzhou China 510660 t:(86-20)82169300 f:(86-20)82169558 www.sgs.com  
中国广州天河区东圃珠村灵山路裕景工业园八栋四楼 邮编:510660 t:(86-20)82169300 f:(86-20)82169558 e:sgs-china@sgs.com

Member of SGS Group (Société Générale de Surveillance)

P. 02

0769 3313847

CHANG YUNG

05-APR-2005 16:43

GLOBAL SOUND CO., LTD.  
SONGMU INDUSTRY ZONE,  
DALANG TOWN, DONGGUAN CITY,  
GUANGDONG, CHINA

Report on the submitted samples said to be 纸浆

- Test Method :
- 1) With reference to EPA 3050B:1996 / Other acid digestion. Analysis was performed by Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES).
  - 2) With reference to EN 1122:2001 / Other acid digestion. Analysis was performed by Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES).
  - 3) With reference to EPA Method 3052: 1996 / other acid digestion. Analysis was performed by Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES).
  - 4) With reference to EPA Method 3060A: 1996 and then analyzed by colorimetric method 7196A: 1992.
  - 5) With reference to SGS in-house method. Analysis was performed by GC/MS.

Test Results :

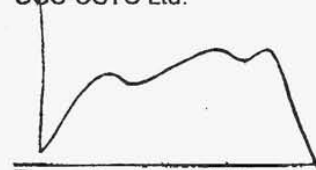
Element	Black round shaped paper
1) Lead (Pb)	3 ppm
2) Cadmium (Cd)	< 2 ppm
3) Mercury (Hg)	< 2 ppm
4) Hexavalent Chromium (Cr <sup>6+</sup> )	< 2 ppm

5)

Flame Retardants	Black round shaped paper	Detection Limit
<b>Polybrominated Biphenyls (PBBs)</b>	---	---
Monobromobiphenyl	N.D.	5 ppm
Dibromobiphenyl	N.D.	5 ppm
Tribromobiphenyl	N.D.	5 ppm
Tetrabromobiphenyl	N.D.	5 ppm
Pentabromobiphenyl	N.D.	5 ppm
Hexabromobiphenyl	N.D.	5 ppm
Heptabromobiphenyl	N.D.	5 ppm
Octabromobiphenyl	N.D.	5 ppm
Nonabromobiphenyl	N.D.	5 ppm
Decabromobiphenyl	N.D.	5 ppm
<b>Polybrominated Diphenylethers (PBDEs)</b>	---	---
Monobromodiphenyl ether	N.D.	5 ppm
Dibromodiphenyl ether	N.D.	5 ppm
Tribromodiphenyl ether	N.D.	5 ppm
Tetrabromodiphenyl ether	N.D.	5 ppm
Pentabromodiphenyl ether	N.D.	5 ppm
Hexabromodiphenyl ether	N.D.	5 ppm
Heptabromodiphenyl ether	N.D.	5 ppm
Octabromodiphenyl ether	N.D.	5 ppm
Nonabromodiphenyl ether	N.D.	5 ppm
Decabromodiphenyl ether	N.D.	5 ppm

- Note : - N.D. = Not Detected, which is lower than detection limit value.  
 - Results shown are total weight of dry sample.  
 - The tests of PBBs & PBDEs were conducted by SGS GZ LTD.

Signed for and on behalf of  
SGS-CSTC Ltd.



Zhang Yanzheng, Helen  
Section Manager



## Test Report

No.: GZSCR050103219/LP

Date: JAN 21, 2005

Page 1 of 1

XIA MEN JING HONG INDUSTRY  
TRADE CO.,LTD. (DONGGUAN BRANCH)  
TIAN XIN VILLAGE, HUANG JIANG TOWN,  
DONGGUAN CITY

Report on the submitted sample said to be PAPER BOARD (端子纸板)

SGS Ref No. : SZ050100851EC-3.1  
Buyer : SONY  
Manufacture/Supplier : JING HONG  
Country of Origin : CHINA  
Country of Destination : JAPAN; USA  
Sample Receiving Date : JAN 18, 2005  
Testing Period : JAN 18, 2005 TO JAN 21, 2005

Test Requested : As specified by client, to determine the Lead, Cadmium, Mercury &amp; Hexavalent Chromium content in the submitted sample.

Test Method : Lead content - With reference to EPA method 3050B: 1996 .  
Cadmium content - With reference to BS EN1122: 2001 method B .  
Mercury content - With reference to EPA 3052: 1996.  
Hexavalent Chromium content - With reference to EPA 3060A: 1996 & EPA 7196A, 1992 .  
Analysis was performed by Atomic Absorption Spectrometer and Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES) / UV-VIS Spectrophotometer.

### RESULTS

	White paper board
Lead Content (Pb)	N.D.
Cadmium Content (Cd)	N.D.
Mercury Content (Hg)	N.D.
Hexavalent Chromium Content [Cr(VI)]	N.D.

Note : - N.D. = Not Detected (< 2 ppm)  
- ppm = mg/kg

\*\*\* End of Report \*\*\*

Signed for and on behalf of  
SGS-CSTC Ltd.

Xie Yongbiao, Sam  
Lab Manager

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SGS-CSTC Standards Technical Services Co. Ltd.  
Guangzhou Branch-Chemical Laboratory

4/F, Block 8, Yu Jing Industrial Park, Ling Shan Road, Zhu Cun Dong Pu Area, Tianhe District, Guangzhou China 510660  
中国·广州·天河区东圃珠村灵山路裕景工业园八栋四楼 邮编:510660

GZCM 203101

Member of SGS Group(Société Générale de Surveillance)

景鴻工貿有限公司  
東莞市黃江鎮田心村一隊

對據稱為紙板之化驗報告

此報告是報告 2002738/EC, 日期為 SEP 19 2004 之報告的中文譯本 (翻譯內容如有歧異, 概以英文報告為準)。

SGS 工作編號 : 1612633  
SGS 參考編號 : SZECO040910535EC  
樣品接收日期 : 二零零四年九月十日  
化驗時間/日期 : 二零零四年九月十日 至 十九日

測試項目 : 1) 檢定所提供樣品之六價鉻 (CrVI) 含量。  
2) 檢定所提供樣品之聚溴化苯 (PBBs), 聚溴化苯醚 (PBBEs/PBDEs) 含量。

測試方法 : 1) 根據 EPA Method 3060A 和 7196A。  
依照 EPA Method 3060A, 利用鹼抽取樣品中的六價鉻 (CrVI)。並以 Colorimetric method 7196A。  
2) 參照內部方法進行測定。  
利用氣相色譜儀及質譜儀 (GC/MS) 進行測定。

阻燃劑	白色塑膠	測試限定
聚溴化苯	---	
溴化苯	未能測出	5 毫克/ 千克
二溴化苯	未能測出	5 毫克/ 千克
三溴化苯	未能測出	5 毫克/ 千克
四溴化苯	未能測出	5 毫克/ 千克
五溴化苯	未能測出	5 毫克/ 千克
六溴化苯	未能測出	5 毫克/ 千克
七溴化苯	未能測出	5 毫克/ 千克
八溴化苯	未能測出	5 毫克/ 千克
多溴化二苯醚	---	---
溴化二苯醚	未能測出	5 毫克/ 千克
二溴化二苯醚	未能測出	5 毫克/ 千克
三溴化二苯醚	未能測出	5 毫克/ 千克
四溴化二苯醚	未能測出	5 毫克/ 千克
五溴化二苯醚	未能測出	5 毫克/ 千克
六溴化二苯醚	未能測出	5 毫克/ 千克
七溴化二苯醚	未能測出	5 毫克/ 千克
八溴化二苯醚	未能測出	5 毫克/ 千克

(以上結果為測試樣品的總重量)

評註 : 未能測出 = 低於測試限定

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H11039954



**Test Report**

No.: GZSCR050105255/LP

Date: FEB 01, 2005

Page 1 of 1

XIA MEN JING HONG INDUSTRY TRADE CO., LTD. (DONGGUAN BRANCH)  
TIAN XIN VILLAGE, HUANG JIANG TOWN, DONGGUAN CITY

Report on the submitted sample said to be TERMINAL PIN (端子板接线片)

SGS Ref No. : SZ050101381EC-4.1  
Buyer : SONY  
Manufacturer / Supplier : JING HONG  
Country of Origin : CHINA  
Country of Destination : JAPAN, USA  
Sample Receiving Date : JAN 26, 2005  
Testing Period : JAN 26, 2005 TO FEB 02, 2005

Test Requested : As specified by client, to determine the Lead, Cadmium, Mercury & Hexavalent Chromium content in the submitted sample.

Test Method : Lead content – In-house method, with reference to EPA method 3050B: 1996 .  
Cadmium content – In-house method, with reference to BS EN1122: 2001 method B .  
Mercury content – In-house method, with reference to EPA 3052: 1996.  
Hexavalent Chromium content – with reference to EPA 3060A: 1996 & EPA 7196A: 1992 .  
Analysis was performed by Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES) / UV-VIS Spectrophotometer.


**RESULTS**

	Silvery metal part
Lead Content (Pb)(ppm)	10
Cadmium Content (Cd)	N.D.
Mercury Content (Hg)	N.D.
Hexavalent Chromium Content [Cr(VI)]	N.D.

Note : - N.D. = Not Detected (< 2 ppm)  
- ppm = mg/kg

\*\*\* End of Report \*\*\*

Signed for and on behalf of  
SGS-CSTC Ltd.

  
He Xiaoyan, Jane  
Tech. Manager

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**GZCM 198755**

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4F A BUILDING SOUTHEM ZONE, CHANG XIN SCIENCE BUILDINGS, NEW ZONE CHANZHOU

The following sample(s) was/were submitted and identified on behalf of the applicant as:

Sample Name : THE WIRE OF TIN  
SGS Ref No. : SHEC0050202971-4

Sample Receiving Date : February 21, 2005  
Testing Period : February 21 to February 24, 2005

Test Requested : 1) To determine the Cadmium Content of the submitted sample.  
2) To determine the Lead content of the submitted sample.  
3) To determine Mercury Content of the submitted sample.  
4) To determine Hexavalent Chromium content of the submitted sample.

Test method : 1) With reference to BS EN 1122:2001, Method B or other acid digestion.  
Analysis was performed by Inductively Coupled Argon Plasma – Atomic Emission Spectrometry (ICP-AES) or Atomic Absorption Spectrometry.  
2) With reference to US EPA Method 3050B or other acid digestion.  
Analysis was performed by Inductively Coupled Argon Plasma – Atomic Emission Spectrometry (ICP-AES) or Atomic Absorption Spectrometry.  
3) With reference to US EPA 3052 or other acid digestion.  
Analysis was performed by Inductively Coupled Argon Plasma – Atomic Emission Spectrometry (ICP-AES).  
4) With reference to US EPA3060A and US EPA7196A  
Analysis was performed by UV-VIS Spectrometric method.

**Test Results**

No.	Item	Unit	MDL	A
1	Cadmium (Cd)	ppm	2	N.D.
2	Lead (Pb)	ppm	2	20
3	Mercury (Hg)	ppm	2	N.D.
4	Hexavalent Chromium (Cr VI)	ppm	2	N.D.

(Result shown is of the total weight of sample)

**Sample Description:**

A. Silvery metal wire

Note : ppm=mg/kg  
MDL= Method Detection Limit  
N.D. = Not detected. (<MDL)

Signed for and on behalf of  
SGS-CSTC Chemical Laboratory

  
Ella Zhang  
Supervisor



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**SHCH 219923**