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Report No.: SZEM140900485401
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TEST REPORT

Application No.: SZEM1409004854IT
Applicant: Shenzhen Inecan Electronic co., Ltd.
Address of Applicant: 54A Puxia Rd, Liuyue Village, Henggang Town, Longgang District, Shenzhen, Guangdong, China
Equipment Under Test (EUT):
EUT Name: headphone
Model No.: CNE-CHP2
Trade mark: CANYON
Standards: EN 55022:2010
EN 55024:2010
Date of Receipt: 2014-09-03
Date of Test: 2014-09-05
Date of Issue: 2014-09-11

Test Result :	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives. The protection requirements with respect to electromagnetic compatibility contained in Directive 2004/108/EC are considered.



Jack Zhang

EMC Laboratory Manager



The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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.

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2 Test Summary

Item	Standard	Method	Class	Result
Radiated Disturbance (30MHz-1GHz)	EN 55022:2010	EN 55022:2010	Class B	Pass
Electrostatic Discharge	EN 55024:2010	EN 61000-4-2:2009	4kV Contact Discharge 8kV Air Discharge	Pass
Radiated Immunity (80MHz-1GHz)	EN 55024:2010	EN 61000-4-3:2006/A1:2008/A2:2010	3V/m, 80%, 1kHz Amp. Mod.	Pass

The highest frequency of the internal sources of the EUT	Upper frequency of measurement Range
Below 108MHz	1GHz
108MHz to 500MHz	2GHz
500MHz to 1GHz	5GHz
Above 1GHz	5 times the highest frequency or 6 GHz, whichever is less



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4 General Information

4.1 Details of E.U.T.

Power Supply: Supplied by mobile phone.

4.2 Description of Support Units

The EUT has been tested as an independent unit.

4.3 Standards Applicable for Testing

Table 1 : Tests Carried Out Under EN 55022:2010

Method	Item	Status
EN 55022:2010	Conducted Disturbance at Mains Terminals (150kHz-30MHz)	×
EN 55022:2010	Conducted Disturbance at Telecommunication Port (150kHz-30MHz)	×
EN 55022:2010	Radiated Disturbance(30MHz-1GHz)	√
EN 55022:2010	Radiated Disturbance(above 1GHz)	×

Table 2 : Tests Carried Out Under EN 55024:2010

Method	Item	Status
EN 61000-4-2:2009	Electrostatic Discharge	√
EN 61000-4-3:2006 /A1:2008/A2:2010	Radiated Immunity(80MHz-1GHz)	√
EN 61000-4-4:2012	Electrical Fast Transients/Burst at Power Port	×
EN 61000-4-4:2012	Electrical Fast Transients/Burst at Signal Port	×
EN 61000-4-5:2006	Surge at Power Port	×
EN 61000-4-5:2006	Surge at Signal Port	×
EN 61000-4-6:2009	Conducted Immunity at Power Port(150kHz-80MHz)	×
EN 61000-4-6:2009	Conducted Immunity at Signal Port(150kHz-80MHz)	×
EN 61000-4-8:2010	Power Frequency Magnetic Field	×
EN 61000-4-11:2004	Voltage Dips and Interruptions	×

× Indicates that the test is not applicable
√ Indicates that the test is applicable

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch E&E Lab,
No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong,
China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.5 Test Facility

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

- **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab 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.

- **VCCI**

The 3m Semi-anechoic chamber, Full-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, G-416, T-1153 and C-2383 respectively.

- **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 No.: 556682.

- **Industry Canada (IC)**

Two 3m Semi-anechoic chambers of SGS-CSTC Standards Technical Services Co., Ltd. have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1 & 4620C-2.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

4.8 Monitoring of EUT for All Immunity Test

Visual: None

Audio: Monitored the sound of the EUT

5 Equipment List

RE in Chamber					
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Due date (yyyy-mm-dd)
1	10m Semi-Anechoic Chamber	SAEMC	FSAC1018	SEL0303	2015-08-01
2	EMI Test Receiver	Rohde & Schwarz	ESR	SEL0295	2015-06-18
3	EMI Test software	AUDIX	E3	SEL0050	N/A
4	Coaxial cable	SGS	N/A	SEL0288	2015-06-10
5	Coaxial cable	SGS	N/A	SEL0275	2015-06-10
6	Coaxial cable	SGS	N/A	SEL0274	2015-06-10
7	BiConiLog Antenna (30M-1GHz)	Schwarzbeck	VULB9160	SEL0308	2015-07-14
8	BiConiLog Antenna (30M-1GHz)	Schwarzbeck	VULB9160	SEL0309	2015-07-14
9	Pre-amplifier	Sonoma Instrument Co	310N	SEL0298	2015-07-28

Electrostatic Discharge					
Item	Equipment	Manufacturer	Model No	Inventory No	Cal Due Date
1	ESD Simulator	SCHAFFNER	NSG 438	SEL0035	2015-3-16
2	ESD Ground Plane	SGS(3m*3m)	N/A	SEL0004	N/A

Radiated Immunity(80MHz-1GHz)					
Item	Equipment	Manufacturer	Model No	Inventory No	Cal Due Date
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2015-6-10
2	Signal Generator	Rohde & Schwarz	SML03	SEL0068	2015-5-16
3	RF Amplifier 0.8-3.0GHz	Amplifier Research	60S1G3	SEL0065	2014-10-24
4	Power Meter	Rohde & Schwarz	NRVD	SEL0069	2015-5-16
5	Power Sensor	Rohde & Schwarz	URV5-Z2	SEL0071	2015-5-16
6	Power Sensor	Rohde & Schwarz	URV5-Z2	SEL0072	2015-5-16
7	Software EMC32	Rohde & Schwarz	EMC32-S	SEL0082	N/A
8	Log-periodic Antenna	Amplifier Research	AT1080	SEL0073	N/A
9	Antenna Tripod	Amplifier Research	TP1000A	SEL0074	N/A



General used equipment					
Item	Equipment	Manufacturer	Model No	Inventory No	Cal Due Date
1	Humidity/Temperature Indicator	Shanghai	ZJ1-2B	SEL0102 to SEL0103	2014-10-24
2	Humidity/Temperature Indicator	Shanghai	ZJ1-2B	SEL0101	2014-10-24
3	Barometer	ChangChun	DYM3	SEL0088	2015-05-16

6 Emission Test Results

6.1 Radiated Disturbance(30MHz-1GHz)

Test Requirement:	EN 55022:2010
Test Method:	EN 55022:2010
Frequency Range:	30MHz to 1GHz
Measurement Distance:	10m
Limit:	
30MHz-230MHz	30 dB(μ V/m) quasi-peak
230MHz-1GHz	37 dB(μ V/m) quasi-peak
Detector:	Peak for pre-scan (120kHz resolution bandwidth) 30M to 1000MHz

6.1.1 E.U.T. Operation

Operating Environment:

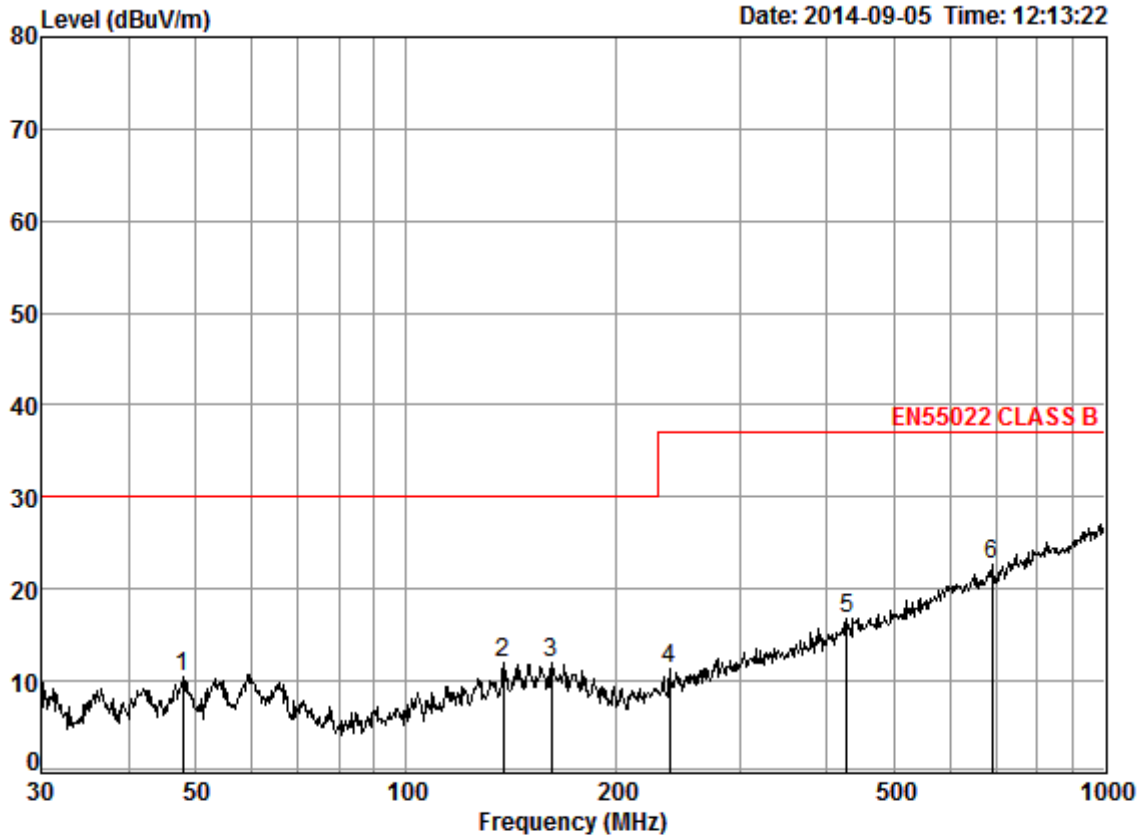
Temperature: 23.0 °C Humidity: 52 % RH Atmospheric Pressure: 1010 mbar

Test mode: a: On mode:Keep the EUT working normally.

6.1.2 Measurement Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.

Mode:a;Polarization:Horizontal



Condition: EN55022 CLASS B 10m VULB 9160 10M Horizontal

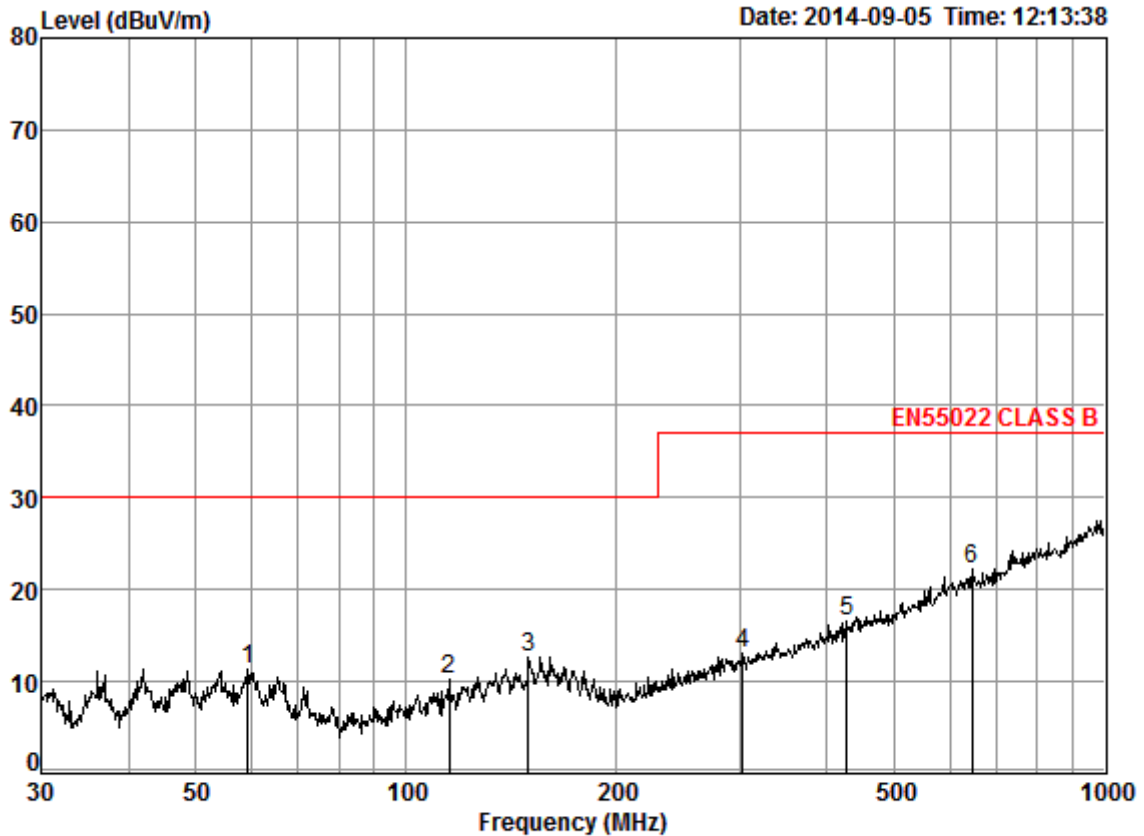
Job No. : 4854IT

Test Mode: On mode

		Cable	Ant	Preamp	Read		Limit	Over
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	47.83	1.56	11.92	32.66	29.58	10.40	30.00	-19.60
2	137.90	1.43	12.48	32.62	30.73	12.02	30.00	-17.98
3	161.47	1.57	13.07	32.61	29.97	12.00	30.00	-18.00
4	238.31	1.95	11.26	32.57	30.70	11.34	37.00	-25.66
5	428.02	2.63	16.09	32.55	30.58	16.75	37.00	-20.25
6	689.56	3.30	20.47	32.59	31.43	22.61	37.00	-14.39



Mode:a;Polarization:Vertical



Condition: EN55022 CLASS B 10m VULB 9160 10M Vertical

Job No. : 4854IT

Test Mode: On mode

		Cable	Ant	Preamp	Read		Limit	Over
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	59.23	1.89	11.91	32.66	30.23	11.37	30.00	-18.63
2	115.32	1.29	10.86	32.64	30.66	10.17	30.00	-19.83
3	149.49	1.50	13.14	32.62	30.54	12.56	30.00	-17.44
4	303.54	2.21	13.16	32.55	30.16	12.98	37.00	-24.02
5	428.02	2.63	16.09	32.55	30.34	16.51	37.00	-20.49
6	645.12	3.30	19.96	32.61	31.52	22.17	37.00	-14.83

7 Immunity Test Results

7.1 Performance Criteria Description in EN 55024:2010

Criterion A

The equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

Criterion B

After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance.

During the test, degradation of performance is allowed. However, no change of operating state or stored data is allowed to persist after the test.

If the minimum performance level (or the permissible performance loss) is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

Criterion C

Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions.

Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

7.2 Electrostatic Discharge

Test Requirement: EN 55024:2010
 Test Method: EN 61000-4-2:2009
 Performance Criterion: B
 Discharge Impedance: 330Ω/150pF
 Number of Discharge: Minimum of four test points (a minimum of 50 discharges at each point)
 Discharge Mode: Single Discharge
 Discharge Period: 1 second minimum

7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 20.0 °C Humidity: 55 % RH Atmospheric Pressure: 1010 mbar

Test mode: a: On mode:Keep the EUT working normally.

7.2.2 Test Results:

Observations:

Test Point:

1. All insulated enclosure and seams.
2. All accessible metal parts of the enclosure.
3. All side

Discharge type	Level (kV)	Polarity	Test Point	Result / Observations
Air Discharge	2,4,8	+	1	A
Air Discharge	2,4,8	-	1	A
Contact Discharge	4	+	2	A
Contact Discharge	4	-	2	A
Horizontal Coupling	4	+	3	A
Horizontal Coupling	4	-	3	A
Vertical Coupling	4	+	3	A
Vertical Coupling	4	-	3	A

Results:

A: No degradation in the performance of the EUT was observed.

7.3 Radiated Immunity(80MHz-1GHz)

Test Requirement: EN 55024:2010
 Test Method: EN 61000-4-3:2006/A1:2008/A2:2010
 Performance Criterion: A
 Frequency Range: 80MHz to 1GHz
 Antenna Polarisation: Vertical and Horizontal
 Modulation: 1kHz,80% Amp. Mod,1% increment

7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 23.0 °C Humidity: 56 % RH Atmospheric Pressure: 1010 mbar
 Test mode: a: On mode:Keep the EUT working normally.

7.3.2 Test Results:

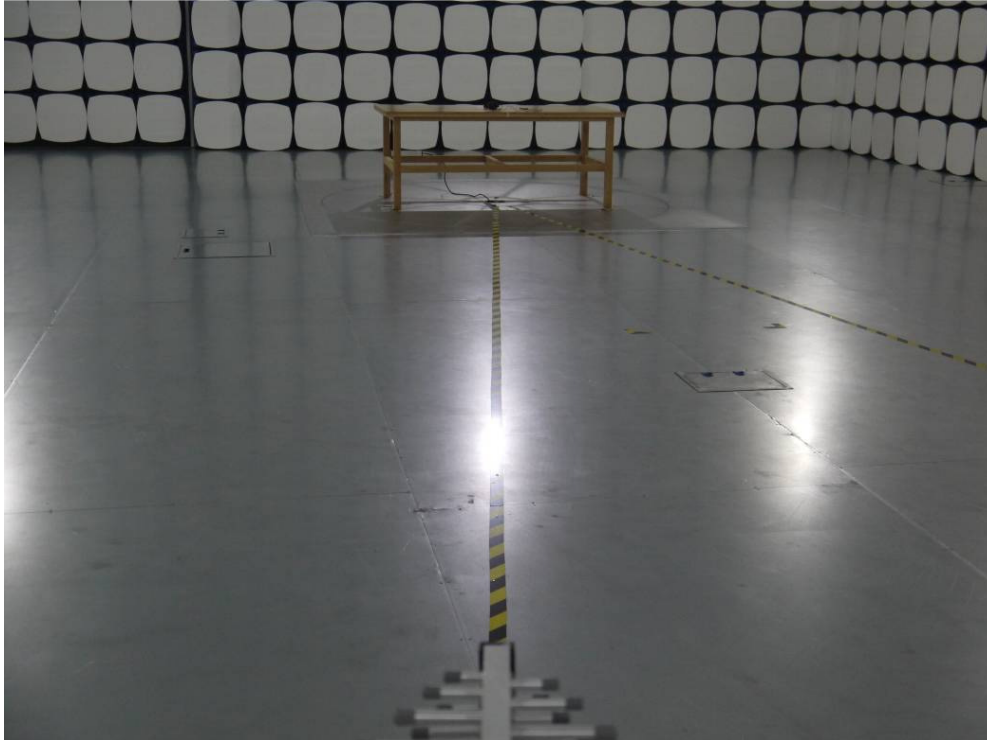
Frequency	Level (V/m)	EUT Face	Dwell time	Result / Observations
80MHz-1GHz	3	Front	2s	A
80MHz-1GHz	3	Back	2s	A
80MHz-1GHz	3	Left	2s	A
80MHz-1GHz	3	Right	2s	A
80MHz-1GHz	3	Top	2s	A
80MHz-1GHz	3	Underside	2s	A

Results:

A: No degradation in the performance of the EUT was observed.

8 Photographs

8.1 Radiated Disturbance(30MHz-1GHz) Test Setup



8.2 Electrostatic Discharge Test Setup



8.3 Radiated Immunity(80MHz-1GHz) Test Setup



8.4 EUT Constructional Details





