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

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FCC MPE REPORT

Application No.:	SHEM1304000529RF
Applicant:	AXESSTEL,INC.
Equipment Under Test (EUT):	
NOTE: The following sample(s) submitted was/were identified on behalf of the client as	
Product Name:	Home Alert
Brand Name:	Axesstel
Model:	AX140
Added Model:	N/A
FCC ID:	PH7AX140
Standards:	FCC Rules 47 CFR §2.1091 & FCC OET Bulletin 65 supplement C
Date of Receipt:	April 07, 2013
Date of Test:	April 15, 2013 to May 13, 2013
Date of Issue:	June 04, 2013
Test Result :	**PASS***

* In the configuration tested, the EUT (Equipment under test) 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	/	June 04, 2013	/	Original

Authorized for issue by:				
Engineer		Zenger Zhang Print Name		
Clerk		Susie Liu Print Name		
Reviewer		Keny Xu **Print Name**		

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4 General Information

4.1 Client Information

Applicant:	AXESSTEL, INC
Address of Applicant:	6815 Flanders Drive, Ste 210, San Diego, CA92121, USA
Manufacturer:	Axesstel (Shanghai) Ltd.
Address of Manufacturer:	Room 1101, Building 19, No.1515 Gumei Road, Xuhui District, Shanghai
Factory:	Eastcom incorporated Co.,LTD.

4.2 General Description of E.U.T.

Product Name	Home Alert
Brand Name:	Axesstel
Model No:	AX140
Added Model:	N/A
Product Description:	Home Alert

4.3 Technical Specifications:

Operation Frequency:	CDMA Cell 800 and PCS 1900
Modulation Type:	Fwd 1, Rvs1/SO2, Fwd 2,Rvs2/SO9, Fwd 3,Rvs3/SO55, Fwd 4,Rvs3/SO55, Fwd 5,Rvs4/SO55
Power Supply:	9V DC Battery or 5V DC Charger.
Antenna Type	Integral

4.4 Accessories of Product:

Battery:	Battery Type:	9V DC	
Adapter:	Model No.:	TA31-0502000	
	Rated Input:	AC 100V-240V 50-60Hz 0.4A	
	Rated Output:	DC 5.0V 2.0A	
	Cable length:	DC port:	180cm (2 wires)

4.5 Support equipments for Testing

The EUT has been tested with support equipments as below.

Equipment Name	Manufacturer	Model No.	Supplied by Client or SGS?
Alert Control	Axesstel	N/A	Client

4.6 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.
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4.7 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

The Equipment under Test (EUT) has been tested at SGS's (own or subcontracted) laboratories.

The following table summarizes the specific reference documents such as harmonized standards or test specifications which were used for testing as SGS's (own or subcontracted) laboratories.

Identity	Document Title	Version
FCC OET Bulletin 65 supplement C	Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields	2001

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

FCC LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	$(180/f^2)$*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

6 Summary of Results

Frequency Band	Limit (mW/cm²)	Result (mW/cm²)	Verdict
Cell 800	0.55	0.038	Pass
PCS 1900	1.00	0.022	Pass

7 Measurement and Calculation

7.1 Conducted Output Power

Test Date: April 22, 2013(From RF test Reprot SHEM130400052902)

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

Test Results record:

Cell 800			
Center Frequency (MHz)	**Channel No.**	**Test Mode**	**RF Power output dBm(Average)**
824.70	1013	Fwd 1, Rvs1/SO2	24.32
835.89	363	Fwd 1,Rvs1/SO2	24.44
848.31	777	Fwd 1,Rvs1/SO2	24.12
824.70	1013	Fwd 2,Rvs2/SO9	24.28
835.89	363	Fwd 2,Rvs2/SO9	24.36
848.31	777	Fwd 2,Rvs2/SO9	24.36
824.70	1013	Fwd 3,Rvs3/SO55	24.26
835.89	363	Fwd 3,Rvs3/SO55	24.41
848.31	777	Fwd 3,Rvs3/SO55	24.29
824.70	1013	Fwd 4,Rvs3/SO55	24.38
835.89	363	Fwd 4,Rvs3/SO55	24.31
848.31	777	Fwd 4,Rvs3/SO55	24.33
824.70	1013	Fwd 5,Rvs4/SO55	24.37
835.89	363	Fwd 5,Rvs4/SO55	24.51
848.31	777	Fwd 5,Rvs4/SO55	24.48

US PCS1900			
Center Frequency (MHz)	**Channel No.**	**Test Mode**	**RF Power output dBm(Average)**
1851.25	25	Fwd 1, Rvs1/SO2	23.20
1880.00	600	Fwd 1,Rvs1/SO2	23.33
1908.75	1175	Fwd 1,Rvs1/SO2	23.01
1851.25	25	Fwd 2,Rvs2/SO9	23.31
1880.000	600	Fwd 2,Rvs2/SO9	23.24
1908.75	1175	Fwd 2,Rvs2/SO9	23.26
1851.25	25	Fwd 3,Rvs3/SO55	23.31
1880.00	600	Fwd 3,Rvs3/SO55	23.28
1908.75	1175	Fwd 3,Rvs3/SO55	23.15
1851.25	25	Fwd 4,Rvs3/SO55	23.38
1880.00	600	Fwd 4,Rvs3/SO55	23.18
1908.75	1175	Fwd 4,Rvs3/SO55	23.19
1851.25	25	Fwd 5,Rvs4/SO55	23.36
1880.00	600	Fwd 5,Rvs4/SO55	23.37
1908.75	1175	Fwd 5,Rvs4/SO55	23.34

7.2 MPE Evaluation

For Cell 800 Evalution Results:

The EUT's operating frequencies 824MHz to 849MHz; the maximum output power specification of the Tune Up Procedure is 24.7dBm. The maximum peak gain is 0.15dBi. Duty factor is 100%

Equation from page 18 of OET 65, Edition 97-01

$S = PG^* \text{ Duty factor} / 4\pi R^2$

P =Power Input to antenna(300mWatts)
G =Antenna Gain(1.04numeric)
R = distance to the center of radiation of antenna (in meter) = 20cm
$S = (300*1.04*1)/ (4\pi * 20^2) = 0.062 mW/cm^2$

For PCS1900 Evalution Results:

The EUT's operating frequencies 1850MHz to 1910MHz; the maximum output power specification of the Tune Up Procedure is 24.7dBm. The maximum peak gain is -2.0dBi. Duty factor is 100%

Equation from page 18 of OET 65, Edition 97-01

$S = PG^* \text{ Duty factor} / 4\pi R^2$

P =Power Input to antenna(300mWatts)
G =Antenna Gain(0.631numeric)
R = distance to the center of radiation of antenna (in meter) = 20cm
$S = (300*0.631*1)/ (4\pi * 20^2) = 0.038 mW/cm^2$

Note:

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

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

8 EUT Constructional Details

Refer to the <AX140--External Photos > & < AX140--Internal Photos >.

THE END OF REPORT