

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.



TEST REPORT

Report Number: 13110249HKG-002

Application for Original Grant of 47 CFR Part 15 Certification

Industry Canada RSS-Gen Report

900MHz Superheterodyne Receiver (Parent Unit)

FCC ID: N7TAC423R

Prepared and Checked by:

A handwritten signature in black ink, appearing to read 'Benny Lau', written over a horizontal line.

Lau Chin Yu, Benny
Lead Engineer

Approved by:

A handwritten signature in black ink, appearing to read 'Melvin Nip', written over a horizontal line.

Nip Ming Fung, Melvin
Assistant Manager
December 16, 2013

- The test report only allows to be revised within the retention period unless further standard or the requirement was noticed.
- This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

Intertek Testing Services Hong Kong Ltd.

2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.



GENERAL INFORMATION

Applicant Name:	Angelcare Monitors Inc.
Applicant Address:	9975, Av. De Catania, Local B, Brossard, Quebec J4Z 3V6 Canada
FCC Specification Standard:	FCC Part 15, October 1, 2012 Edition
FCC ID:	N7TAC423R
FCC Model(s):	AC423
IC Specification Standard:	RSS-Gen Issue 3, December 2010
IC Model(s):	AC423
Type of EUT:	Superheterodyne Receiver
Description of EUT:	900MHz Superheterodyne Receiver (Parent Unit)
Serial Number:	N/A
Sample Receipt Date:	November 5, 2013
Date of Test:	November 11, 2013 to November 14, 2013
Report Date:	December 16, 2013
Environmental Conditions:	Temperature: +10 to 40°C Humidity: 10 to 90%

Table of Contents

1.0 Test Results Summary & Statement of Compliance	4
1.1 Summary of Test Results	4
1.2 Statement of Compliance	4
2.0 General Description	6
2.1 Product Description	6
2.2 Test Methodology	6
2.3 Test Facility	6
3.0 System Test Configuration	8
3.1 Justification	8
3.2 EUT Exercising Software	9
3.3 Details of EUT and Description of Accessories	9
3.4 Measurement Uncertainty	9
4.0 Test Results	11
4.1 Field Strength Calculation	11
4.2 Radiated Emissions from Receiver	12
4.2.1 Radiated Emission Configuration Photograph	12
4.2.2 Radiated Emission Data	12
4.3 AC Power Line Conducted Emission	16
4.3.1 AC Power Line Conducted Emission Configuration Photograph	16
4.3.2 AC Power Line Conducted Emission Data	16
5.0 Equipment List	19

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.



EXHIBIT 1
TEST RESULTS SUMMARY & STATEMENT OF COMPLIANCE

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.



1.0 Test Results Summary & Statement of Compliance

1.1 Summary of Test Results

Test Items	FCC Part 15 Section	RSS-Gen Section	Results	Details see section
Radiated Emission from Receiver	15.109	6.1	Pass	4.2
AC Power Line Conducted Emission	15.107	7.2.4	Pass	4.3

1.2 Statement of Compliance

The equipment under test is found to be complying with the following standards:

FCC Part 15, October 1, 2012 Edition
RSS-Gen Issue 3, December 2010

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.



EXHIBIT 2
GENERAL DESCRIPTION

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.



2.0 General Description

2.1 Product Description

The AC423 is a 900MHz Superheterodyne Receiver (Parent Unit). It operates at frequency range of 926.00MHz-927.600MHz. The EUT is powered by an adaptor 100-240VAC to 7.5VDC 0.5A and/or 3 x "Ni-MH" type "AAA" size rechargeable battery (1.2V 600mAh).

The test sample is a prototype.

The circuit description is saved with filename: descri.pdf.

2.2 Test Methodology

Both AC power line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2009). Preliminary radiated scans and all radiated measurements were performed in Open Area Test Sites. All Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application.

2.3 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data and conducted data are at Roof Top and 2nd Floor respectively of Intertek Testing Services Hong Kong Ltd., which is located at Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong. This test facility and site measurement data have been fully placed on file with the FCC and the Industry Canada.

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.



EXHIBIT 3
SYSTEM TEST CONFIGURATION

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.



3.0 System Test Configuration

3.1 Justification

For radiated emissions testing, the equipment under test (EUT) was setup to receive continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables (if any) were manipulated to produce worst case emissions.

The EUT was powered by a 100-240VAC to 7.5VDC 0.5A adaptor and/or a fully charged battery.

For the measurements, the EUT was attached to a plastic stand if necessary and placed on the wooden turntable. If the EUT attached to peripherals, they were connected and operational to simulate typical use.

The signal was maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization were varied during the search for maximum signal level. The antenna height was varied from 1 to 4 meters. Radiated emissions were taken at three meters unless the signal level was too low for measurement at that distance. If necessary, a pre-amplifier was used and/or the test was conducted at a closer distance.

Radiated emission measurement for receiver was performed from 30MHz to 5GHz.

Detector function for radiated emissions is in peak mode.

The device is a superheterodyne receiver. No desensitization of the measurement equipment is required as the received signals are continuously.

For AC line conducted emission test, the EUT along with its peripherals were placed on a 1.0m(W)x1.5m(L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT was connected to power mains through a line impedance stabilization network (LISN), which provided 50ohm coupling impedance for measuring instrument. The LISN housing, measuring instrument case, reference ground plane, and vertical ground plane were bounded together. The excess power cable between the EUT and the LISN was bundled.

All connecting cables of EUT and peripherals were manipulated to find the maximum emission.

All relevant operation modes have been tested, and the worst case data was included in this report.

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.



3.2 EUT Exercising Software

The EUT exercise program used during radiated testing was designed to exercise the various system components in a manner similar to a typical use.

3.3 Details of EUT and Description of Accessories

Details of EUT:

An AC adaptor and/or a battery (provided with the unit) were used to power the device. Their description are listed below.

- (1) An AC adaptor (100-240VAC to 7.5VDC 0.5A, Model: T07505U002, Brand: Angelcare) (Supplied by Client)
- (2) 3 x "Ni-MH" type "AAA" size rechargeable battery (1.2V 600mAh, Model: GN60AAAHC, Brand: GP / Model: HFR-44AAAJ600, Brand: HFR) (Supplied by Client)

Description of Accessories:

- (1) Baby Unit, Model: AC423, FCC ID: N7TAC423T (Supplied by Client)

3.4 Measurement Uncertainty

When determining of the test conclusion, the Measurement Uncertainty of test has been considered.

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.



EXHIBIT 4
TEST RESULTS

4.0 Test Results

Data is included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

4.1 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

$$FS = RA + AF + CF - AG + PD + AV$$

where

- FS = Field Strength in dB μ V/m
- RA = Receiver Amplitude (including preamplifier) in dB μ V
- CF = Cable Attenuation Factor in dB
- AF = Antenna Factor in dB
- AG = Amplifier Gain in dB
- PD = Pulse Desensitization in dB
- AV = Average Factor in -dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

$$FS = RA + AF + CF - AG + PD + AV$$

Example

Assume a receiver reading of 62.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

$$\begin{aligned} RA &= 62.0 \text{ dB}\mu\text{V} \\ AF &= 7.4 \text{ dB} \\ CF &= 1.6 \text{ dB} \\ AG &= 29 \text{ dB} \\ PD &= 0 \text{ dB} \\ AV &= -10 \text{ dB} \\ FS &= 62 + 7.4 + 1.6 - 29 + 0 + (-10) = 32 \text{ dB}\mu\text{V/m} \end{aligned}$$

$$\text{Level in } \mu\text{V/m} = \text{Common Antilogarithm} [(32 \text{ dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}$$

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.



4.2 Radiated Emissions from Receiver

4.2.1 Radiated Emission Configuration Photograph

Worst Case Radiated Emission
at

936.700 MHz

The worst case radiated emission configuration photographs are saved with filename: config photos.pdf

4.2.2 Radiated Emission Data

The data in tables 1-3 list the significant emission frequencies, the limit and the margin of compliance.

Judgement -

Passed by 6.4 dB margin

Mode: Receiving – Channel 01

Table 1

Radiated Emissions Data

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Limit at 3m (dB μ V/m)	Margin (dB)
V	936.700	22.6	16	33.0	39.6	46.0	-6.4
V	1873.400	46.1	33	27.2	40.3	54.0	-13.7
V	2810.100	43.2	33	30.4	40.6	54.0	-13.4
H	3746.800	40.0	33	33.3	40.3	54.0	-13.7
H	4683.500	37.6	33	34.9	39.5	54.0	-14.5
H	5620.200	35.4	33	36.6	39.0	54.0	-15.0

NOTES:

1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna is used for the emission over 1000MHz.

Mode: Receiving – Channel 05

Table 2

Radiated Emissions Data

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Limit at 3m (dB μ V/m)	Margin (dB)
V	937.500	22.4	16	33.0	39.4	46.0	-6.6
V	1875.000	46.1	33	27.2	40.3	54.0	-13.7
V	2812.500	43.2	33	30.4	40.6	54.0	-13.4
H	3750.000	39.9	33	33.3	40.2	54.0	-13.8
H	4687.500	37.5	33	34.9	39.4	54.0	-14.6
H	5625.000	35.4	33	36.6	39.0	54.0	-15.0

NOTES:

1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna is used for the emission over 1000MHz.

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.



Mode: Receiving – Channel 09

Table 3

Radiated Emissions Data

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Limit at 3m (dB μ V/m)	Margin (dB)
V	938.300	22.5	16	33.0	39.5	46.0	-6.5
V	1876.600	46.6	33	27.2	40.8	54.0	-13.2
V	2814.900	43.2	33	30.4	40.6	54.0	-13.4
H	3753.200	40.0	33	33.3	40.3	54.0	-13.7
H	4691.500	37.6	33	34.9	39.5	54.0	-14.5
H	5629.800	35.6	33	36.6	39.2	54.0	-14.8

NOTES:

1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna is used for the emission over 1000MHz.

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.



4.3 AC Power Line Conducted Emission

- Not applicable – EUT is only powered by battery for operation.
- EUT connects to AC power line. Emission Data is listed in following pages.
- Base Unit connects to AC power line and has transmission. Handset connects to AC power line but has no transmission. Emission Data of Base Unit is listed in following pages.

4.3.1 AC Power Line Conducted Emission Configuration Photograph

Worst Case Line-Conducted Configuration

The worst case line conducted configuration photographs are saved with filename: config photos.pdf.

4.3.2 AC Power Line Conducted Emission Data

The plot(s) and data in the following pages list the significant emission frequencies, the limit and the margin of compliance.

Passed by more than 20 dB margin

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.

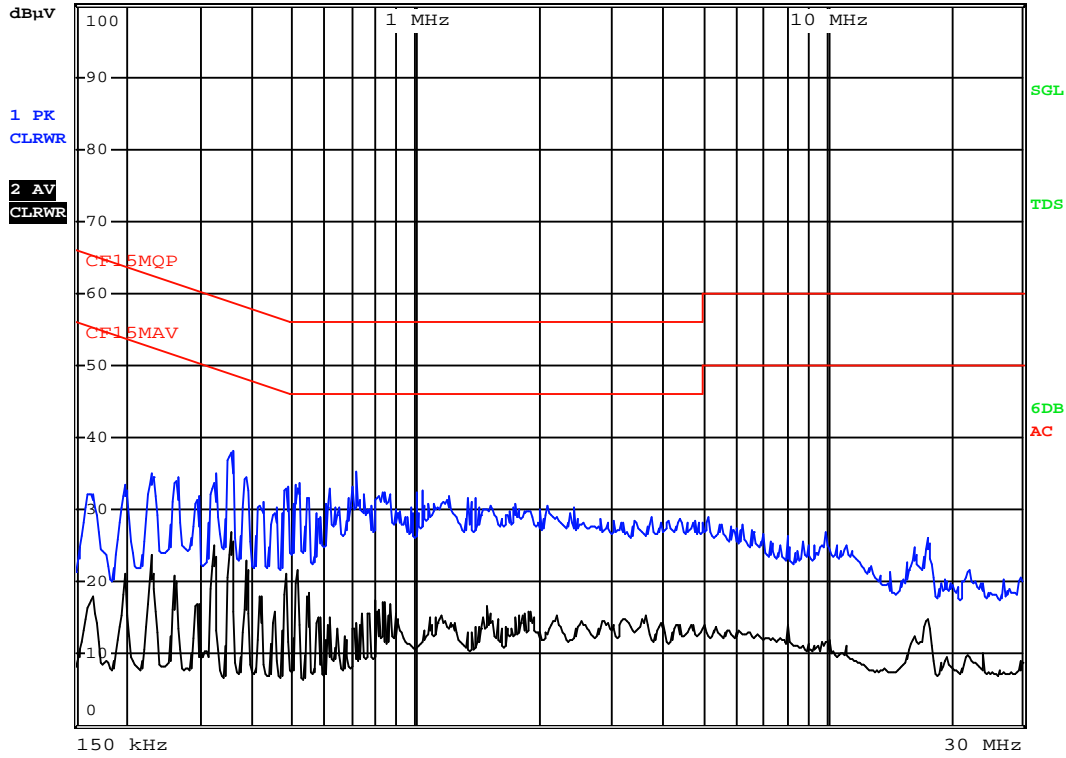


Worst Case: Sound Receiving



RBW 9 kHz
MT 20 ms

Att 10 dB AUTO PREAMP OFF



Date: 14.NOV.2013 15:47:07

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.



**EXHIBIT 5
EQUIPMENT LIST**

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.



5.0 Equipment List

1) Radiated Emissions Test

Equipment	EMI Test Receiver	Spectrum Analyzer	Biconical Antenna
Registration No.	EW-2666	EW-2188	EW-2512
Manufacturer	R&S	AGILENTTECH	EMCO
Model No.	ESC17	E4407B	3104C
Calibration Date	Jun. 20, 2013	Nov. 5, 2012	Jun. 25, 2013
Calibration Due Date	Jun. 20, 2014	Feb. 5, 2014	Dec. 25, 2014

Equipment	Log Periodic Antenna	Double Ridged Guide Antenna
Registration No.	EW-0446	EW-1015
Manufacturer	EMCO	EMCO
Model No.	3146	3115
Calibration Date	Apr. 30, 2013	Mar. 5, 2013
Calibration Due Date	Oct. 30, 2014	Sep. 5, 2014

2) Conducted Emissions Test

Equipment	EMI Test Receiver	LISN
Registration No.	EW-2666	EW-2501
Manufacturer	R&S	R&S
Model No.	ESC17	ENV-216
Calibration Date	Jun. 20, 2013	Nov. 30, 2012
Calibration Due Date	Jun. 20, 2014	Nov. 30, 2013

END OF TEST REPORT