

APPLICATION FOR VERIFICATION
On Behalf of
Tatco Products, Inc.

PIR CHIME WITH WIRELESS RECEIVER
Model No.: 57930-R

FCC ID: 2ACVQ57930R

Prepared for : Tatco Products, Inc.
Address : 6750-B Jones Mill Court Norcross, GEORGIA 30092,
USA
Prepared by : Accurate Technology Co., Ltd.
Address : F1, Bldg. A&D, Changyuan New Material Port, Keyuan
Rd., Science & Industry Park, Nanshan District, Shenzhen
518057, P.R. China

Tel: +86-755-26503290
Fax: +86-755-26503396

Report No. : ATE20141452
Date of Test : July 26, 2014-Aug 20, 2014
Date of Report : Aug 20, 2014

TABLE OF CONTENTS

Description	Page
Test Report Declaration	
1. TEST RESULTS SUMMARY	4
2. GENERAL INFORMATION	5
2.1. Product of Device (EUT)	5
2.2. Accessory and Auxiliary Equipment	5
2.3. Description of Test Facility	6
2.4. Measurement Uncertainty	6
3. POWER LINE CONDUCTED MEASUREMENT	7
3.1. For Power Line Conducted Emission	7
3.2. Power Line Conducted Emission Measurement Limits (Class B)	7
3.3. Power Line Conducted Emission Measurement Results	7
4. RADIATED EMISSION MEASUREMENT	8
4.1. For Radiated Emission Measurement	8
4.2. TEST CONFIGURATION	8
4.3. Block Diagram of Test Setup	9
4.4. Radiated Emission Limit (Class B)	9
4.5. EUT Configuration on Measurement	9
4.6. Operating Condition of EUT	10
4.7. Test Procedure	10
4.8. Radiated Emission Noise Measurement Result	11
5. PHOTOGRAPHS	16
5.1. Photos of Radiated Measurement	16

Test Report Declaration

Applicant& address : Tatco Products, Inc.
6750-B Jones Mill Court Norcross, GEORGIA 30092, USA
Manufacturer& address : Zhongshan J-Xing Electrical Co., Ltd
Block K, Yong An Industrial Park, Yong An Road, Dongfeng
Town, Zhongshan City, Guangdong, China 528425
Product : PIR CHIME WITH WIRELESS RECEIVER
Model No. : 57930-R
Trade name :



Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart B Class B & ANSI C63.4: 2009

The device described above is tested by Accurate Technology Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B Class B limits both radiated and conducted emissions. The measurement results are contained in this test report and Accurate Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Accurate Technology Co., Ltd.

Date of Test : July 26, 2014-Aug 20, 2014

Prepared by :

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

(Tim.zhang, Engineer)

Approved & Authorized Signer :

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

(Sean, Manager)

1. TEST RESULTS SUMMARY

Test Items	Test Standard	Test Results
Power Line Conducted Emission	FCC Part 15 Subpart B	N/A
Radiated Emission	FCC Part 15 Subpart B	Pass

2. GENERAL INFORMATION

2.1.Product of Device (EUT)

Product	:	PIR CHIME WITH WIRELESS RECEIVER
Model No.	:	57930-R
Applicant	:	Tatco Products, Inc.
Address	:	6750-B Jones Mill Court Norcross, GEORGIA 30092, USA
Manufacturer	:	Zhongshan J-Xing Electrical Co., Ltd
Address	:	Block K, Yong An Industrial Park, Yong An Road, Dongfeng Town, Zhongshan City, Guangdong, China 528425
Power Supply	:	DC 4.5V (Powered by Battery)
Date of sample received	:	July 26, 2014
Date of Test	:	July 26 – Aug 20, 2014

2.2.Accessory and Auxiliary Equipment

N/A

2.3. Description of Test Facility

EMC Lab : Accredited by TUV Rheinland Shenzhen, May 10, 2004

Listed by FCC
The Registration Number is 253065
Listed by FCC
The Registration Number is 752051

Listed by Industry Canada
The Registration Number is 5077A-1
Listed by Industry Canada
The Registration Number is 5077A-2

Accredited by China National Accreditation Committee for
Laboratories
The Certificate Registration Number is L3193

Name of Firm : Accurate Technology Co., Ltd.
Site Location : F1, Bldg. A&D, Changyuan New Material Port, Keyuan
Rd., Science & Industry Park, Nanshan District, Shenzhen
518057, P.R. China

2.4. Measurement Uncertainty

Conducted emission expanded uncertainty : U=2.23dB, k=2
Power disturbance expanded uncertainty : U=2.92dB, k=2
Radiated emission expanded uncertainty : U=3.08dB, k=2
(9kHz-30MHz)
Radiated emission expanded uncertainty : U=4.42dB, k=2
(30MHz-1000MHz)
Radiated emission expanded uncertainty : U=4.06dB, k=2
(Above 1GHz)

3. POWER LINE CONDUCTED MEASUREMENT

3.1. For Power Line Conducted Emission

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCS30	100307	Jan. 11, 2014	1 Year
2.	L.I.S.N.	Schwarzbeck	NLSK8126	8126431	Jan. 11, 2014	1 Year
3.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100815	Jan. 11, 2014	1 Year
4.	50Ω Coaxial Switch	Anritsu Corp	MP59B	620028393 3	Jan. 11, 2014	1 Year
Expanded Uncertainty: U= 2.23dB, k=2						

3.2. Power Line Conducted Emission Measurement Limits (Class B)

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15—0.50	66—56*	56—46*
0.50—5.00	56	46
5.00—30.0	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

3.3. Power Line Conducted Emission Measurement Results

N/A.

4. RADIATED EMISSION MEASUREMENT

4.1. For Radiated Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 11, 2014	1 Year
2.	Test Receiver	Rohde & Schwarz	ESCS30	100307	Jan. 11, 2014	1 Year
3.	Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 15, 2014	1 Year
4.	Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 15, 2014	1 Year
5.	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 15, 2014	1 Year
6.	50 Coaxial Switch	Anritsu Corp	MP59B	6200506474	Jan. 11, 2014	1 Year
12.	Pre-Amplifier	Rohde & Schwarz	CBLU11835 40-01	3791	Jan. 11, 2014	1 Year

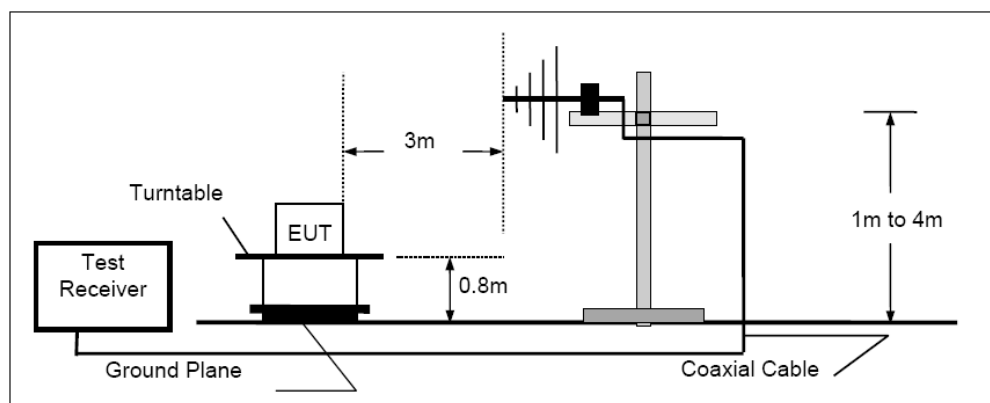
Expanded Uncertainty (9kHz-30MHz): U=3.08dB, k=2

Expanded Uncertainty (30MHz-1000MHz): U=4.42dB, k=2

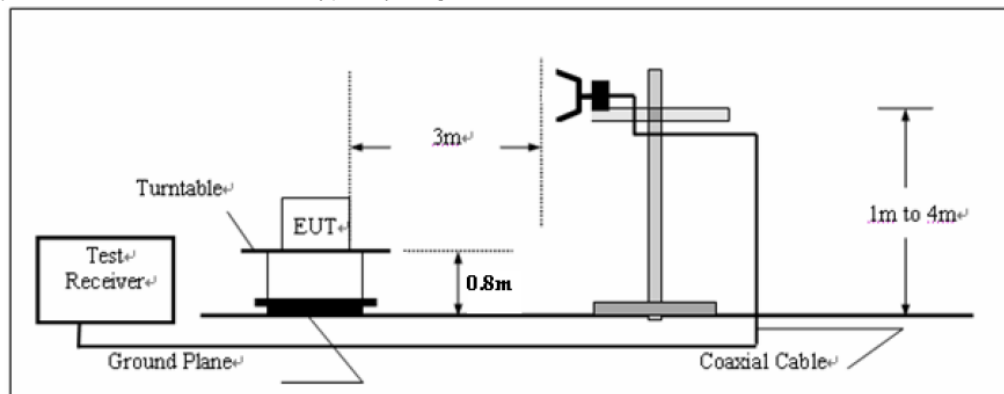
Expanded Uncertainty (Above 1GHz): U=4.06dB, k=2

4.2. TEST CONFIGURATION

(A) Radiated Emission Test Set-Up, Frequency below 1000MHz



(B) Radiated Emission Test Set-Up, Frequency above 1000MHz



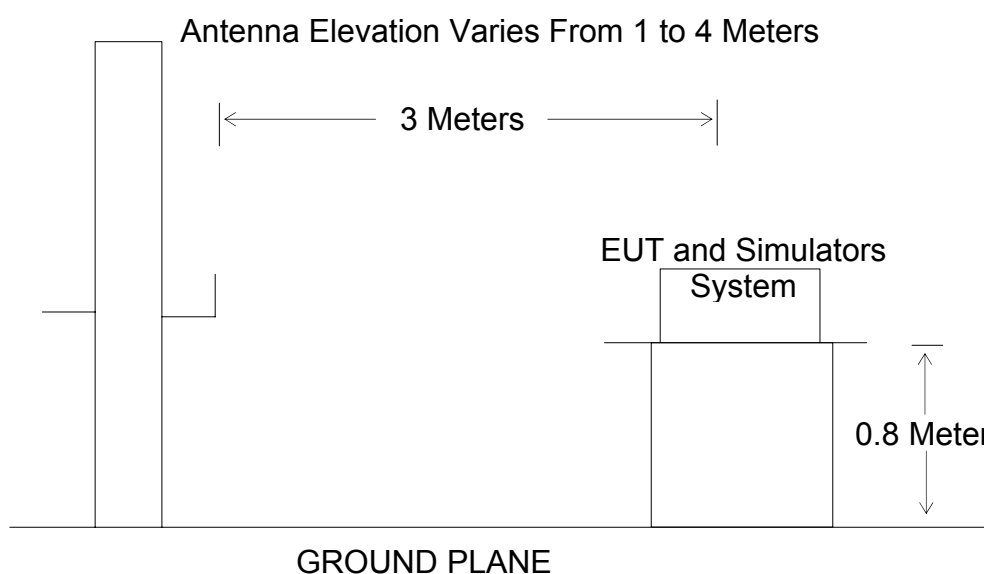
4.3. Block Diagram of Test Setup

4.3.1. Block diagram of connection between the EUT and simulators



(Test Mode: Receiving)

4.3.2. Anechoic Chamber Test Setup Diagram



4.4. Radiated Emission Limit (Class B)

Frequency MHz	Distance Meters	Field Strengths Limit	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V/m})$
30-88	3	100	40.0
88-216	3	150	43.5
216-960	3	200	46.0
960-1000	3	500	54.0

Remark: (1) Emission level $\text{dB}(\mu\text{V}) = 20 \log \text{Emission level } \mu\text{V/m}$.
(2) The smaller limit shall apply at the cross point between two frequency bands.
(3) Distance is the distance in meters between the measuring instrument antenna and the closest point of any part of the device or system.

4.5. EUT Configuration on Measurement

The equipment is installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.6. Operating Condition of EUT

4.6.1. Setup the EUT and simulator as shown as Section 4.2.

4.6.2. Turn on the power of all equipment.

4.6.3. Let the EUT work in test mode and measure it.

4.7. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated emission measurement.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

Frequency band(MHz)	Detector	RBW(KHz)	VBW(KHz)
30-1000	QP	120	300
Above 1000	Peak	1000	3000
	Average	1000	0.01

4.8.Radiated Emission Noise Measurement Result

PASS.

Test mode : Receiving								
Horizontal	Below 1G							
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	33.5623	29.47	-17.30	12.17	40.00	-27.83	QP
	2	562.6624	27.85	-12.55	15.30	46.00	-30.70	QP
	3	851.0353	26.35	-6.95	19.40	46.00	-26.60	QP
	Above 1G							
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	2777.910	43.82	-5.10	38.72	54.00	-15.28	peak
	2	3326.488	43.87	-3.22	40.65	54.00	-13.35	peak
	3	3763.304	43.74	-1.91	41.83	54.00	-12.17	peak
Vertical	Below 1G							
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	38.4808	29.68	-18.62	11.06	40.00	-28.94	QP
	2	622.8899	27.21	-11.18	16.03	46.00	-29.97	QP
	3	896.9964	25.89	-6.15	19.74	46.00	-26.26	QP
	Above 1G							
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1710.004	45.20	-8.76	36.44	54.00	-17.56	peak
	2	3048.290	44.14	-4.23	39.91	54.00	-14.09	peak
	3	3826.433	43.88	-1.75	42.13	54.00	-11.87	peak

Below 1G



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: alen #4849

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: PIR CHIME WITH WIRELESS RECEIVER

Mode: RX 315MHz

Model: 57930-R

Manufacturer: J-Xing

Polarization: Horizontal

Power Source: DC 4.5V

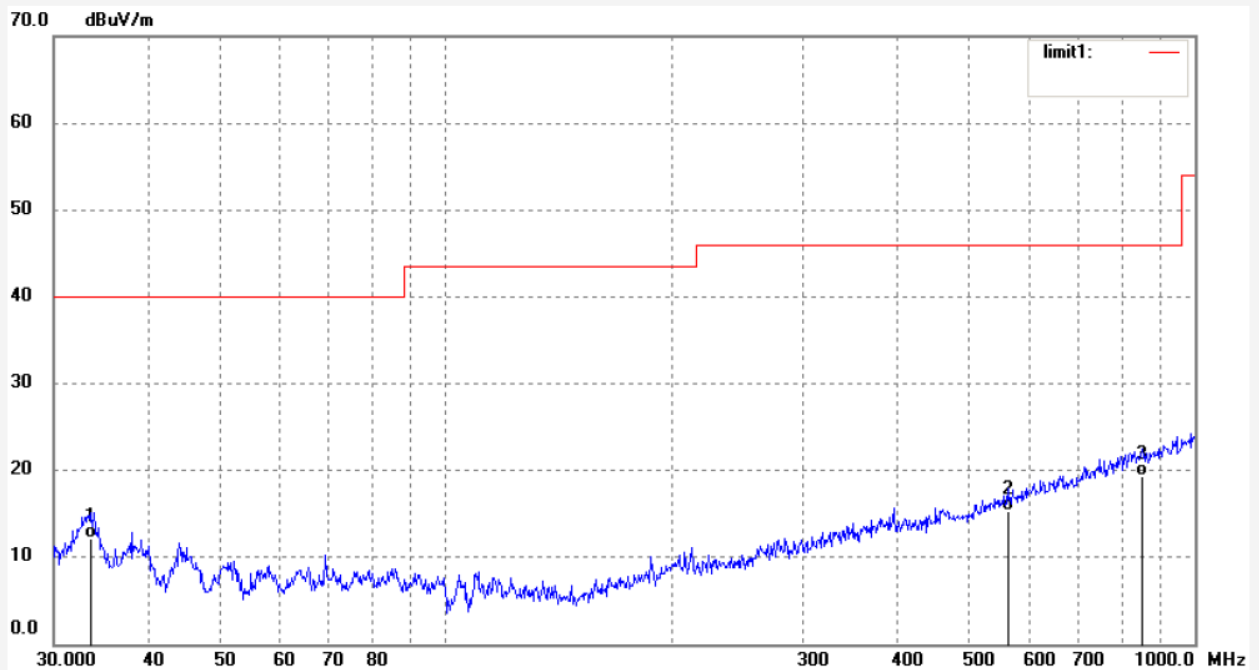
Date: 14/08/14/

Time: 9/16/35

Engineer Signature:

Distance: 3m

Note: Report No:ATE20141452



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	33.5623	29.47	-17.30	12.17	40.00	-27.83	QP			
2	562.6624	27.85	-12.55	15.30	46.00	-30.70	QP			
3	851.0353	26.35	-6.95	19.40	46.00	-26.60	QP			



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Report No.: ATE20141452

Page 13 of 16

Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: alen #4850

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: PIR CHIME WITH WIRELESS RECEIVER

Mode: RX 315MHz

Model: 57930-R

Manufacturer: J-Xing

Polarization: Vertical

Power Source: DC 4.5V

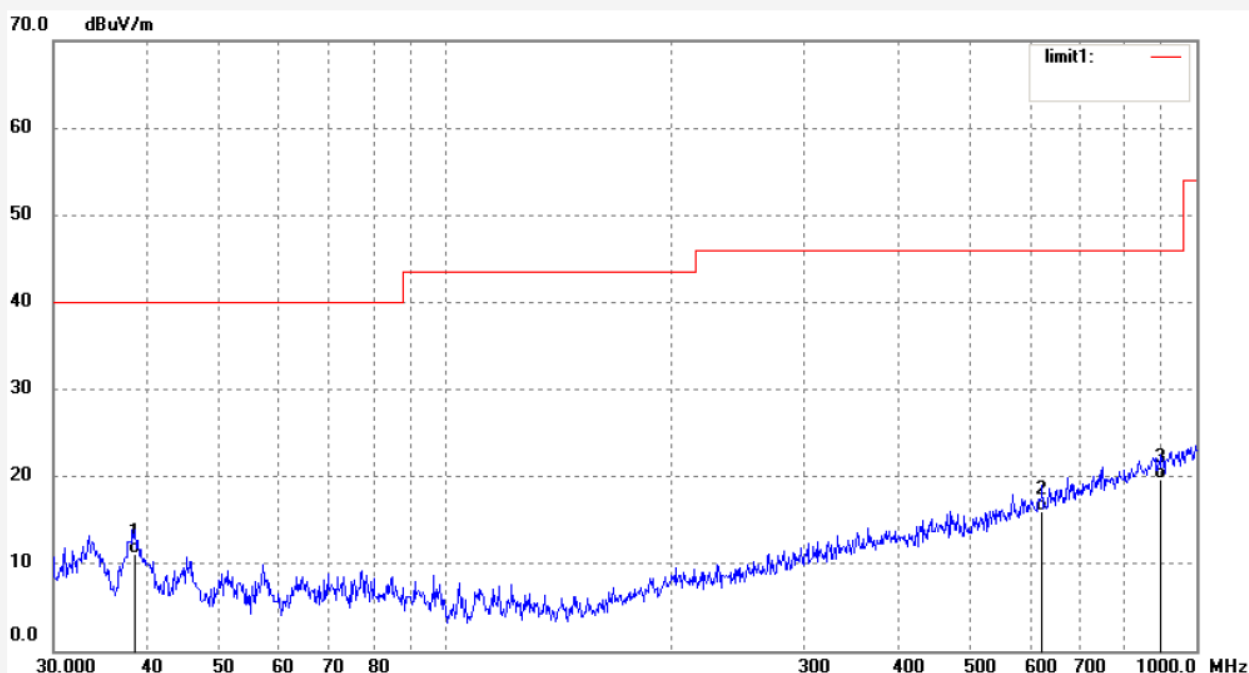
Date: 14/08/14/

Time: 9/16/59

Engineer Signature:

Distance: 3m

Note: Report No:ATE20141452



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	38.4808	29.68	-18.62	11.06	40.00	-28.94	QP			
2	622.8899	27.21	-11.18	16.03	46.00	-29.97	QP			
3	896.9964	25.89	-6.15	19.74	46.00	-26.26	QP			

Above 1G



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: alen #4834

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: PIR CHIME WITH WIRELESS RECEIVER

Mode: RX 315MHz

Model: 57930-R

Manufacturer: J-Xing

Polarization: Horizontal

Power Source: DC 4.5V

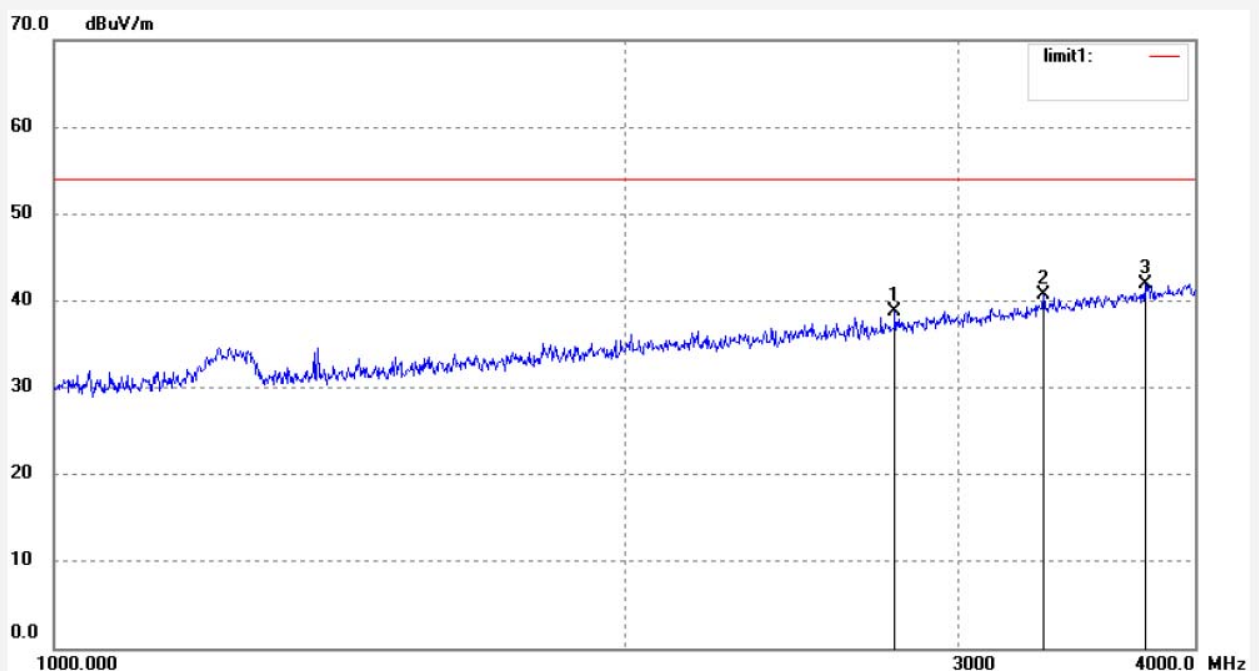
Date: 14/08/08/

Time: 9/49/31

Engineer Signature:

Distance: 3m

Note: Report No:ATE20141452



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2777.910	43.82	-5.10	38.72	54.00	-15.28	peak			
2	3326.488	43.87	-3.22	40.65	54.00	-13.35	peak			
3	3763.304	43.74	-1.91	41.83	54.00	-12.17	peak			



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Report No.: ATE20141452

Page 15 of 16

Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: alen #4835

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: PIR CHIME WITH WIRELESS RECEIVER

Mode: RX 315MHz

Model: 57930-R

Manufacturer: J-Xing

Polarization: Vertical

Power Source: DC 4.5V

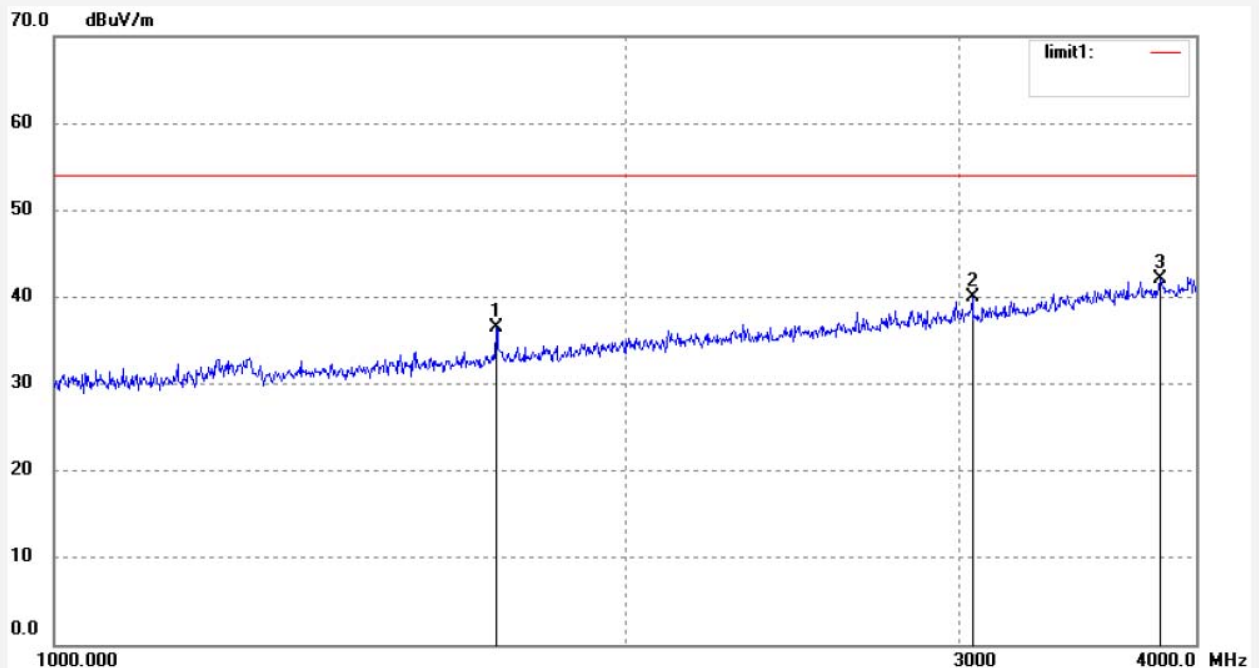
Date: 14/08/08/

Time: 9/50/18

Engineer Signature:

Distance: 3m

Note: Report No:ATE20141452

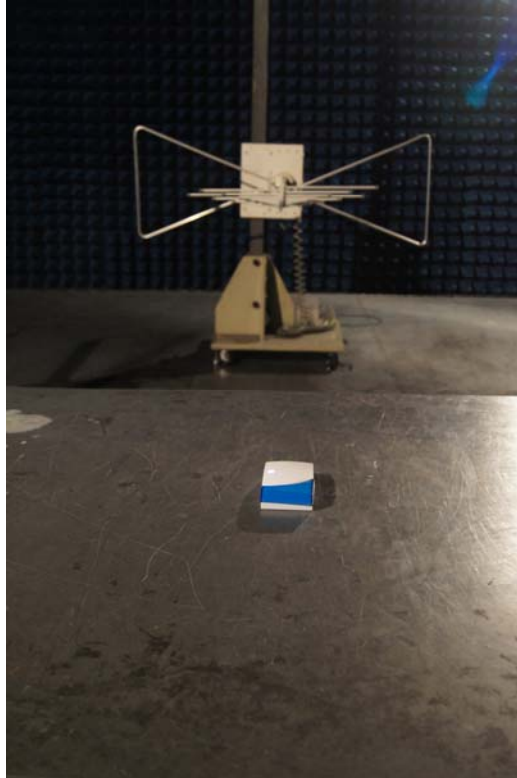


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1710.004	45.20	-8.76	36.44	54.00	-17.56	peak			
2	3048.290	44.14	-4.23	39.91	54.00	-14.09	peak			
3	3826.433	43.88	-1.75	42.13	54.00	-11.87	peak			

5. PHOTOGRAPHS

5.1.Photos of Radiated Measurement

Receiving mode(below 1GHz)



Receiving mode (above 1GHz)

