

LST

Shenzhen LST Technology Co.,Ltd.

HOTLINE: 400-096-8018

WWW.LST-LAB.COM

Certificate of Compliance

Certificate No. : LST180523013E
Applicant : Shenzhen Saijinzhi Technology Co.,Ltd.
Applicant Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.
Manufacturer : Shenzhen Saijinzhi Technology Co.,Ltd.
Manufacturer Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.
Product : Solar animal drives
M/N : SJZ-668A
Trademark : SAIJINZHI
Test Standard : EN 55014-1:2017
EN 61000-3-2:2014, EN 61000-3-3:2013
EN 55014-2:2015
EN 61000-4-2:2009, EN 61000-4-3:2006+A1:2008+A2:2010,
EN 61000-4-4:2012, EN 61000-4-5:2014,
EN 61000-4-6:2014, EN 61000-4-11:2004

The EUT described above has been tested by us with the listed standards and found in compliance with the council EMC directive 2014/30/EU. It is possible to use CE marking to demonstrate the compliance with this EMC Directive. It is only valid in connection with the test report number: LST180523013ER.

CE



Manager

Issue Date: May.28, 2018

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CE



Manager

Issue Date: May.28, 2018

Registered / Registrado 04/08/2020

No 008052815-0001



**EUROPEAN UNION INTELLECTUAL
PROPERTY OFFICE
CERTIFICATE OF REGISTRATION**

This Certificate of Registration is hereby issued for the Registered Community Design identified below. The corresponding entries have been recorded in the Register of Community Designs.

**OFICINA DE PROPIEDAD INTELECTUAL
DE LA UNIÓN EUROPEA
CERTIFICADO DE REGISTRO**

Este certificado de Registro se expide para el dibujo o Modelo Comunitario registrado que se indica a continuación. Las inscripciones correspondientes se han anotado en el Registro de Dibujos y Modelos Comunitarios.

*The Executive Director / El Director
Ejecutivo*

Christian Archambeau





21	008052815-0001
25	EN - ES
22	04/08/2020
15	04/08/2020
45	06/08/2020
11	008052815-0001
72	Ronghua Li
73	Shenzhen Saijinzhi Technology Co., Ltd. Room 301 3rd Floor Building 9 Yuanling Industrial Park Yuanling Village Shiyan Street Baoan District, Shenzhen REPÚBLICA POPULAR DE CHINA
74	LAWGICAL,S.L.P CALLE GUZMAN EL BUENO 133 9D EDIFICIO BRITANIA E-28003 MADRID ESPAÑA
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54	BG - Устройства за отблъскване на животни
	ES - Dispositivos repelentes de animales
	CS - Zařízení na odpuzování zvířat
	DA - Indretninger til afskrækkelse af dyr
	DE - Tierabwehrvorrichtungen
	ET - Loomatõrjevahendid
	EL - Διατάξεις απώθησης ζώων
	EN - Animal repellent devices
	FR - Dispositifs répulsifs pour les animaux
	IT - Dispositivi repellenti di animali
	LV - Dzīvnieku atbaidīšanas ierīces
	LT - Gyvūnų atbaidymo prietaisai
	HR - Naprave za odbijanje životinje
	HU - Állatriasztók
	MT - Tagħmir li jirripella l-animali
	NL - Inrichtingen voor het afweren van dieren
	PL - Środki odstraszające zwierzęta
	PT - Dispositivos repelentes de animais
	RO - Dispozitive pentru respingerea animalelor
	SK - Prístroje na odpudzovanie zvierat
	SL - Naprave za odganjanje živali
	FI - Eläinten karkotteet
	SV - Djurbortstötande anordningar
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0001.1



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CE/EMC TEST REPORT

For
Shenzhen Saijinzhi Technology Co.,Ltd.

Product Name : Solar animal drives

Trademark : SAIJINZHI

Model Number : SJZ-668A

Prepared For : Shenzhen Saijinzhi Technology Co.,Ltd.

Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan
Street,Bao'an District,Shenzhen.

Report No. : LST180523013ER

Testing laboratory : Shenzhen LST Technology Co., Ltd.

Address : 2/F, Huichao Building, Yintian Industry zone, Ban'an
District, Shenzhen, Guangdong P.R. China

TABLE OF CONTENT

	Page
Test Report Declaration	5
1. GENERAL INFORMATION	5
1.1. Description of Device (EUT)	5
1.2. Tested System Details	5
1.3. Test Uncertainty	5
1.4. Test Facility	5
2. TEST INSTRUMENT USED	6
3. CONDUCTED EMISSION AT THE MAINS TERMINALS TEST	7
3.1. Block Diagram Of Test Setup	7
3.2. Test Standard	7
3.3. Power Line Conducted Emission Limit	7
3.4. EUT Configuration on Test	7
3.5. Operating Condition of EUT	7
3.6. Test Procedure	8
3.7. Test Result	8
4. RADIATION EMISSION TEST	11
4.1. Block Diagram of Test Setup	11
4.2. Test Standard	11
4.3. Radiation Limit	11
4.4. EUT Configuration on Test	12
4.5. Operating Condition of EUT	12
4.6. Test Procedure	12
4.7. Test Result	12
5. HARMONIC CURRENT EMISSION TEST	15
5.1. Block Diagram of Test Setup	15
5.2. Test Standard	15
5.3. Operating Condition of EUT	15
5.4. Test Procedure	15
5.5. Test Results	15
6. VOLTAGE FLUCTUATIONS & FLICKER TEST	16
6.1. Block Diagram of Test Setup	16
6.2. Test Standard	16
6.3. Operating Condition of EUT	16
6.4. Test Procedure	16
6.5. Test Results	16
7. ELECTROSTATIC DISCHARGE IMMUNITY TEST	17
7.1. Block Diagram of Test Setup	17
7.2. Test Standard	17
7.3. Severity Levels and Performance Criterion	17
7.4. EUT Configuration	18
7.5. Operating Condition of EUT	18
7.6. Test Procedure	18
7.7. Test Results	19
8. RF FIELD STRENGTH SUSCEPTIBILITY TEST	20
8.1. Block Diagram of Test Setup	20
8.2. Test Standard	20
8.3. Severity Levels and Performance Criterion	21
8.4. EUT Configuration on Test	21
8.5. Operating Condition of EUT	21

8.6.	Test Procedure	22
8.7.	Test Results.....	22
9.	ELECTRICAL FAST TRANSIENT/BURST IMMUNITY TEST.....	23
9.1.	Block Diagram of EUT Test Setup	23
9.2.	Test Standard.....	23
9.3.	Severity Levels and Performance Criterion.....	23
9.4.	EUT Configuration on Test.....	24
9.5.	Operating Condition of EUT	24
9.6.	Test Procedure	24
9.7.	Test Results.....	24
10.	SURGE TEST	25
10.1.	Block Diagram of EUT Test Setup	25
10.2.	Test Standard.....	25
10.3.	Severity Levels and Performance Criterion.....	25
10.4.	EUT Configuration on Test.....	26
10.5.	Operating Condition of EUT	26
10.6.	Test Procedure	26
10.7.	Test Result.....	26
11.	INJECTED CURRENTS SUSCEPTIBILITY TEST	27
11.1.	Block Diagram of EUT Test Setup	27
11.2.	Test Standard.....	27
11.3.	Severity Levels and Performance Criterion.....	27
11.4.	EUT Configuration on Test.....	28
11.5.	Operating Condition of EUT	28
11.6.	Test Procedure	28
11.7.	Test Result.....	28
12.	VOLTAGE DIPS AND INTERRUPTIONS TEST	29
12.1.	Block Diagram of EUT Test Setup	29
12.2.	Test Standard.....	29
12.3.	Severity Levels and Performance Criterion.....	29
12.4.	EUT Configuration on Test.....	30
12.5.	Operating Condition of EUT	30
12.6.	Test Procedure	30
12.7.	Test Result.....	30
13.	EUT PHOTOGRAPHS	31

Shenzhen LST Testing Co., Ltd.

Applicant : Shenzhen Saijinzhi Technology Co.,Ltd.
Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.
Manufacturer : Shenzhen Saijinzhi Technology Co.,Ltd.
Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.
EUT : Solar animal drives
Model Number : SJZ-668A
Trademark: : SAIJINZHI
Test Date : May.22.2018 – May.28.2018
Date of Report : May.28.2018
Test Result: : The equipment under test was found to be compliance with the requirements of the standards applied.

Test Procedure Used:

EMI : EN 55014-1:2017
EN 61000-3-2:2014, EN 61000-3-3:2013
EMS : EN 55014-2:2015
EN 61000-4-2:2009, EN 61000-4-3:2006+A1:2008+A2:2010,
EN 61000-4-4:2012, EN 61000-4-5:2014,
EN 61000-4-6:2014, EN 61000-4-11:2004

Prepared by(Engineer):



Reviewer(Supervisor):



Approved(Manager):



This test report is based on a single evaluation of one sample of above mentioned products. The test results in the report only apply to the tested sample. It is not permitted to be duplicated in extracts without written approval of Shenzhen LST Technology Co., Ltd.

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT : Solar animal drives
Trademark : SAIJINZHI
Model Number : SJZ-668A
Power Supply : DC5V, 500mA

1.2. Tested System Details

None.

1.3. Test Uncertainty

Conducted Emission
Uncertainty : ± 2.66 dB

Radiated Emission Uncertainty : ± 4.26 dB

1.4. Test Facility

Site Description :

Name of Firm : Shenzhen LST Technology Co., Ltd.

Address : Huichao Building, Yintian Industry zone, Ban'an
District, Shenzhen, Guangdong P.R. China

2. TEST INSTRUMENT USED

For Conducted Emission at the mains terminals Test

Conducted Emission Test (A --- site)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
843 Shielded Room	ChengYu	843 Room	843	Aug. 25, 2017	Aug. 24, 2018
EMI Receiver	R&S	ESCI	101421	Aug. 27, 2017	Aug. 26, 2018
LISN	SCHWARZB ECK	NSLK8127	812779	Sep. 07, 2017	Sep. 06, 2018
Pulse Limiter	R&S	ESH3-Z2	100681	Aug. 25, 2017	Aug. 24, 2018
843 Cable 1#	FUJIKURA	843C1#	001	Aug. 25, 2017	Aug. 24, 2018

For Radiated Emission Test

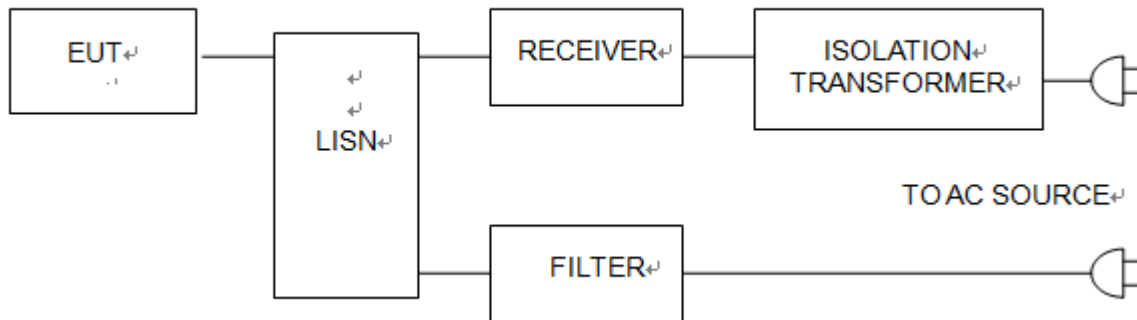
Radiation Emission Test (966 chamber)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	Aug. 25, 2017	Aug. 24, 2018
Spectrum Analyzer	Agilent	E4407B	MY45109572	Aug. 27, 2017	Aug. 26, 2018
Amplifier	Schwarzbeck	BBV9743	9743-119	Aug. 25, 2017	Aug. 24, 2018
Amplifier	Schwarzbeck	BBV9718	9718-270	Aug. 25, 2017	Aug. 24, 2018
Log-periodic Antenna	Schwarzbeck	VULB9160	VULB9160-3 369	Sep. 07, 2017	Sep. 06, 2018
EMI Receiver	R&S	ESCI	101421	Aug. 27, 2017	Aug. 26, 2018
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1275	Aug. 25, 2017	Aug. 24, 2018
966 Cable 1#	CHENGYU	966	004	Aug. 25, 2017	Aug. 24, 2018
966 Cable 2#	CHENGYU	966	003	Aug. 25, 2017	Aug. 24, 2018

For Electrostatic Discharge Immunity Test

For Electrostatic Discharge Immunity Test (A --- site)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
ESD Tester	KIKISUI	KES4201A	UH002321	Aug. 28, 2017	Aug. 27, 2018

3. CONDUCTED EMISSION AT THE MAINS TERMINALS TEST

3.1. Block Diagram Of Test Setup



3.2. Test Standard

EN 55014-1:2017

3.3. Power Line Conducted Emission Limit

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 ~ 30.00	60	50

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

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

3.4. EUT Configuration on Test

The following equipments are installed on conducted emission test to meet EN 55014-1 requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

3.5. Operating Condition of EUT

3.5.1 Setup the EUT and simulators as shown in Section 3.1.

3.5.2 Turn on the power of all equipments.

3.5.3 Let the EUT work in test modes and test it.

3.6. Test Procedure

The EUT is put on the ground and connected to the AC mains through a Artificial Mains Network (AMN). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are checked to find out the maximum conducted emission levels according to the **EN 55014-1** regulations during conducted emission test.

The bandwidth of the test receiver (R&S Test Receiver ESCI) is set at 10KHz.

The frequency range from 150 KHz to 30 MHz is investigated.

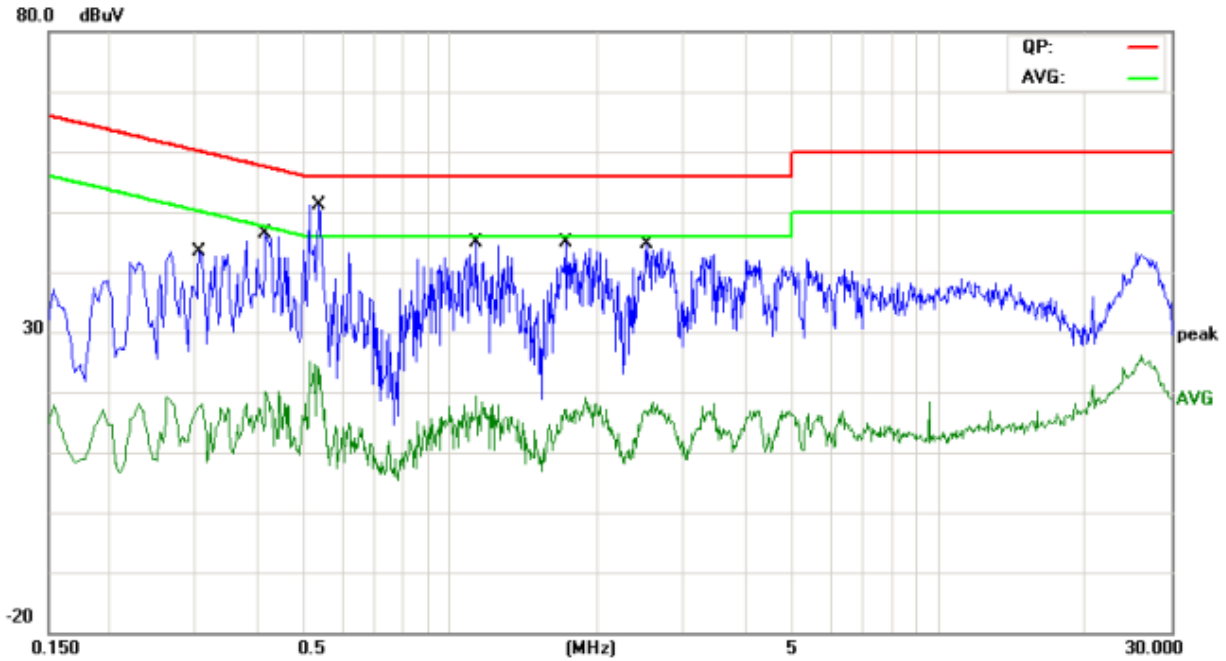
3.7. Test Result

PASS

Please refer to the following page.

Conducted Emission At The Telecom Port Test Data

Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Phase :	Line
Test Voltage :	DC5V	Test Mode:	On Mode

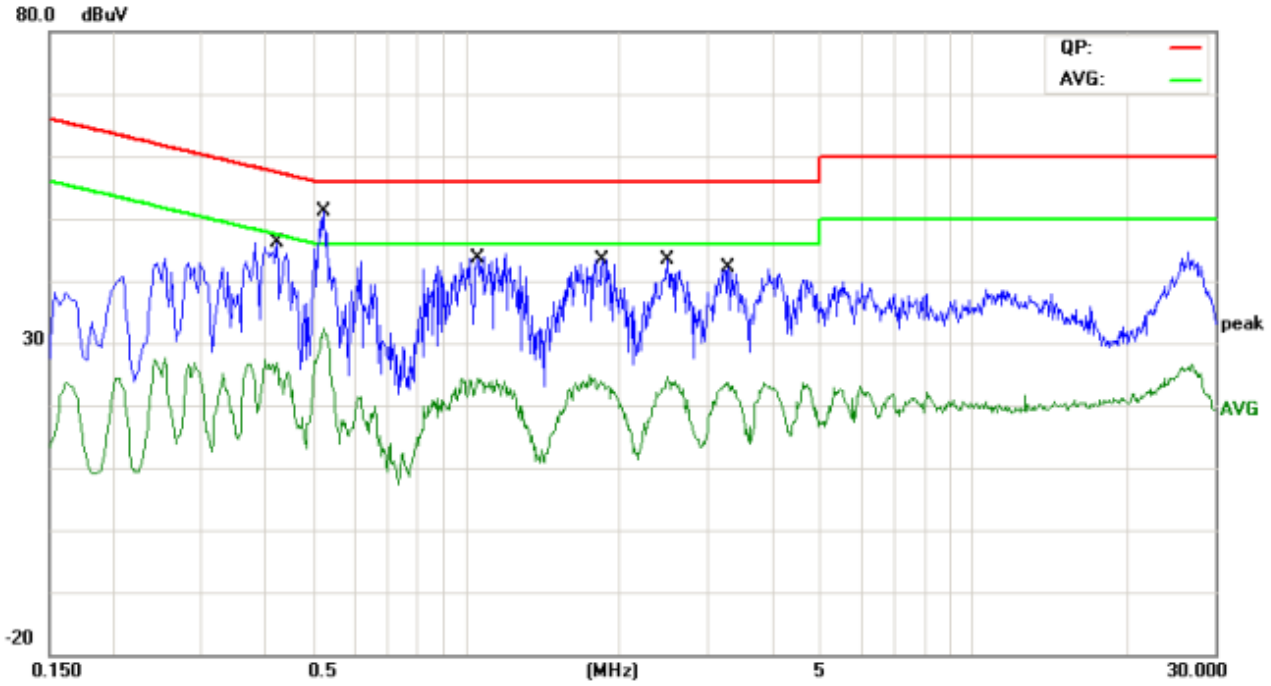


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.3060	25.75	9.59	35.34	60.08	-24.74	QP	
2		0.3060	6.28	9.59	15.87	50.08	-34.21	AVG	
3		0.4180	27.19	9.60	36.79	57.49	-20.70	QP	
4		0.4180	6.62	9.60	16.22	47.49	-31.27	AVG	
5	*	0.5380	31.04	9.60	40.64	56.00	-15.36	QP	
6		0.5380	10.97	9.60	20.57	46.00	-25.43	AVG	
7		1.1340	25.59	9.60	35.19	56.00	-20.81	QP	
8		1.1340	5.99	9.60	15.59	46.00	-30.41	AVG	
9		1.7180	23.10	9.61	32.71	56.00	-23.29	QP	
10		1.7180	4.16	9.61	13.77	46.00	-32.23	AVG	
11		2.5260	22.96	9.63	32.59	56.00	-23.41	QP	
12		2.5260	4.82	9.63	14.45	46.00	-31.55	AVG	

*:Maximum data x:Over limit !:over margin

Conducted Emission At The Telecom Port Test Data

Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Phase :	Neutral
Test Voltage :	DC5V	Test Mode:	On Mode

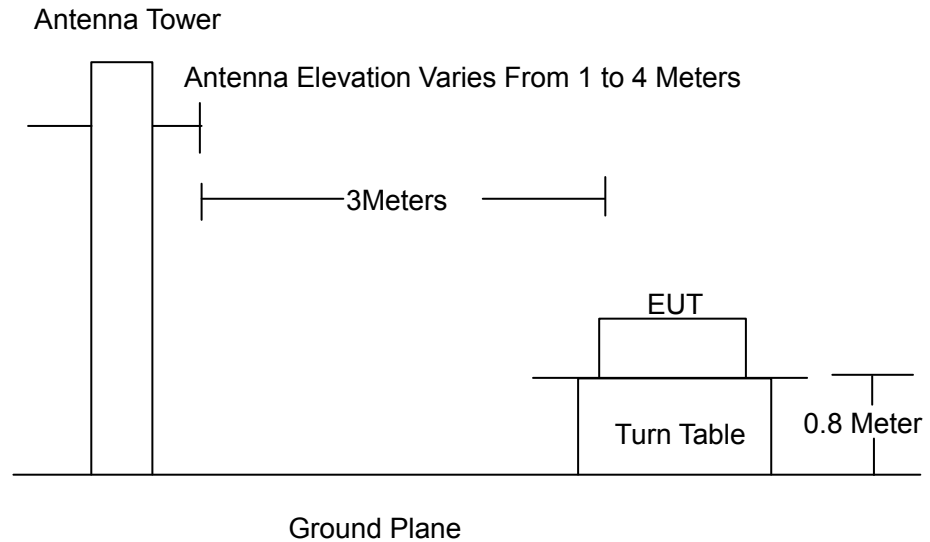


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.4220	27.91	9.58	37.49	57.41	-19.92	QP	
2		0.4220	11.00	9.58	20.58	47.41	-26.83	AVG	
3	*	0.5220	35.91	9.58	45.49	56.00	-10.51	QP	
4		0.5220	21.68	9.58	31.26	46.00	-14.74	AVG	
5		1.0540	26.28	9.59	35.87	56.00	-20.13	QP	
6		1.0540	13.79	9.59	23.38	46.00	-22.62	AVG	
7		1.8580	25.68	9.61	35.29	56.00	-20.71	QP	
8		1.8580	13.51	9.61	23.12	46.00	-22.88	AVG	
9		2.4900	25.30	9.64	34.94	56.00	-21.06	QP	
10		2.4900	13.79	9.64	23.43	46.00	-22.57	AVG	
11		3.2580	23.45	9.68	33.13	56.00	-22.87	QP	
12		3.2580	13.29	9.68	22.97	46.00	-23.03	AVG	

*:Maximum data x:Over limit !:over margin

4. RADIATION EMISSION TEST

4.1. Block Diagram of Test Setup



4.2. Test Standard

EN 55014-1:2017

4.3. Radiation Limit

Frequency MHz	Distance (Meters)	Field Strengths Limits dB(μ V)/m
30 ~ 230	3	40.0
230 ~ 1000	3	47.0

Remark:

- (1) Emission level (dB(μ V)/m) = 20 log Emission level (μ V/m)
- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance refers to the distance in meters between the measuring instrument, antenna and the closed point of any part of the device or system.

4.4.EUT Configuration on Test

The EN 55014-1 regulations test method must be used to find the maximum emission during radiated emission test.

The configuration of EUT is the same as used in conducted emission test. Please refer to Section 2.2.

4.5.Operating Condition of EUT

Same as conducted emission test, which is listed in Section 2.2 except the test set up replaced as Section 4.1.

4.6.Test Procedure

The EUT and its simulators are placed on a turned table that is 0.8 meter above the ground. The turned table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna that is mounted on the antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated biconical and log periodical antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on test. In order to find the maximum emission levels, the interface cable must be manipulated according to EN 55014-1 on radiated emission test.

The bandwidth setting on the field strength meter (R&S Test Receiver ESCI) is set at 120KHz.

The frequency range from 30MHz to 1000MHz is checked.

4.7.Test Result

PASS

Please refer to the following page.

Radiation Emission Test Data			
Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Phase :	Horizontal
Test Voltage :	DC5V	Test Mode:	On Mode

Radiated Emission Measurement

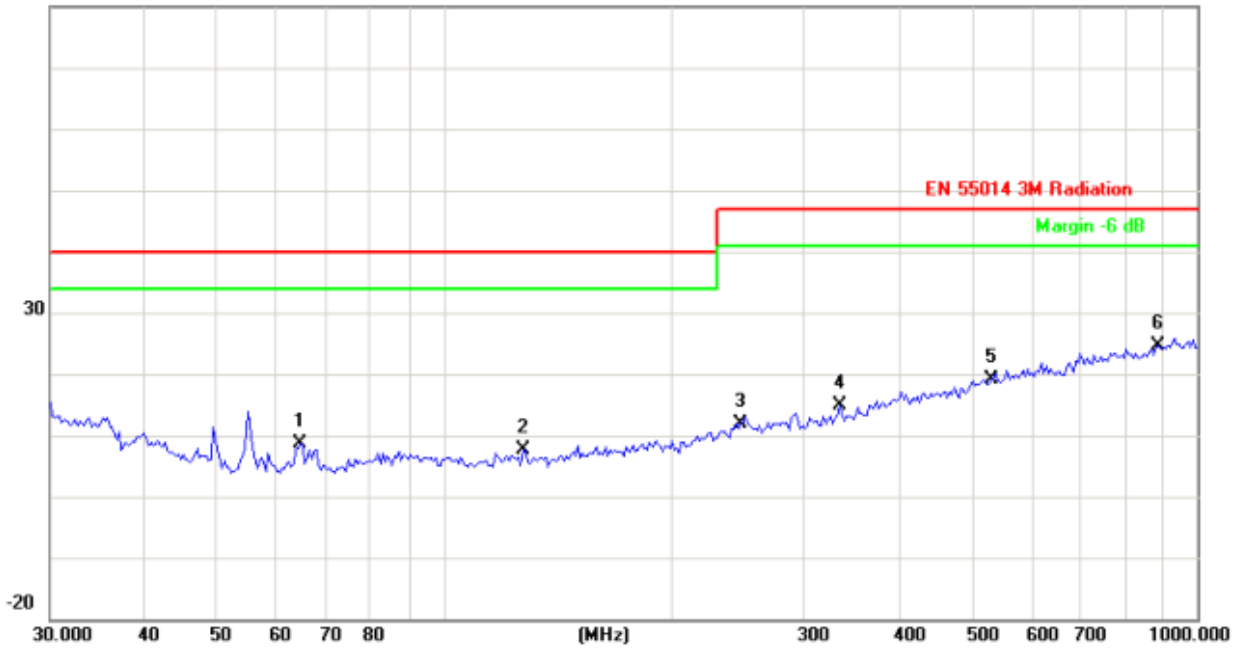
File :5

Data :#21

Date: 2018/5/22

Time: 11:18:13

80.0 dBuV/m



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		64.4331	32.68	-23.99	8.69	40.00	-31.31			peak
2		127.2176	29.95	-22.40	7.55	40.00	-32.45			peak
3		247.6819	29.25	-17.31	11.94	47.00	-35.06			peak
4		334.8589	29.90	-15.07	14.83	47.00	-32.17			peak
5		531.9635	28.80	-9.67	19.13	47.00	-27.87			peak
6	*	887.6099	28.70	-4.08	24.62	47.00	-22.38			peak

*:Maximum data x:Over limit !:over margin

Radiation Emission Test Data			
Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Phase :	Vertical
Test Voltage :	DC5V	Test Mode:	On Mode

Radiated Emission Measurement

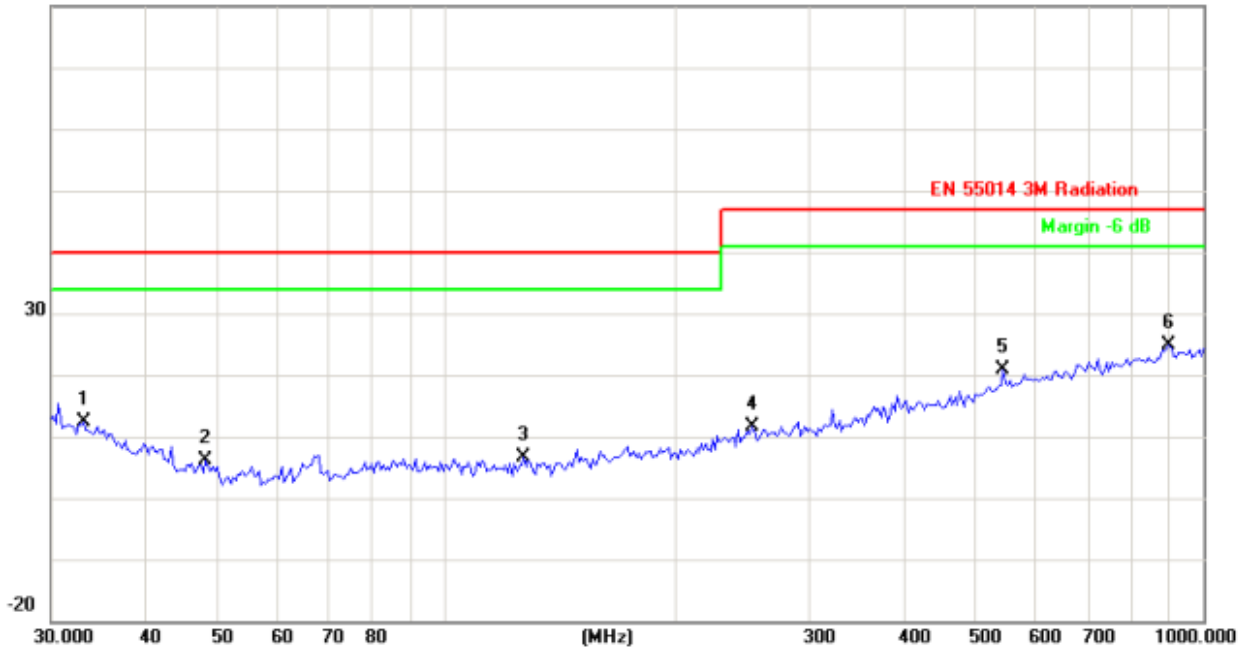
File :5

Data :#22

Date: 2018/5/22

Time: 11:18:44

80.0 dBuV/m

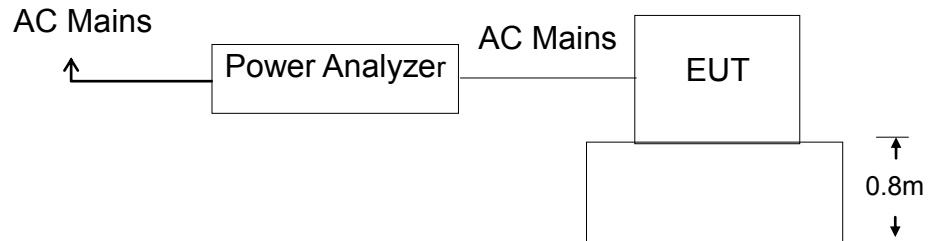


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		33.0950	27.69	-15.33	12.36	40.00	-27.64	peak		
2		47.9940	28.63	-22.57	6.06	40.00	-33.94	peak		
3		126.3286	28.93	-22.39	6.54	40.00	-33.46	peak		
4		252.9482	28.80	-17.12	11.68	47.00	-35.32	peak		
5		543.2742	30.31	-9.32	20.99	47.00	-26.01	peak		
6	*	900.1474	28.47	-3.60	24.87	47.00	-22.13	peak		

*:Maximum data x:Over limit !:over margin

5. HARMONIC CURRENT EMISSION TEST

5.1. Block Diagram of Test Setup



5.2. Test Standard

EN 61000-3-2:2014

5.3. Operating Condition of EUT

- 5.3.1 Setup the EUT as shown in Section 5.1.
- 5.3.2 Turn on the power of all equipments.
- 5.3.3 Let the EUT work in test mode and test it.

5.4. Test Procedure

The power cord of the EUT is connected to the output of the test system. Turn on the power of the EUT and use the test system to test the harmonic current level.

5.5. Test Results

The EUT is powered by the DC only, the test item is not applicable.

6. VOLTAGE FLUCTUATIONS & FLICKER TEST

6.1. Block Diagram of Test Setup

Same as Section 6.1..

6.2. Test Standard

EN 61000-3-3:2013

6.3. Operating Condition of EUT

Same as Section 5.3.. The power cord of the EUT is connected to the output of the test system. Turn on the power of the EUT and use the test system to test the harmonic current level.

Flicker Test Limit

Test items	Limits
Pst	1.0
dc	3.3%
Tmax	4.0%
dt	Not exceed 3.3% for 500ms

6.4. Test Procedure

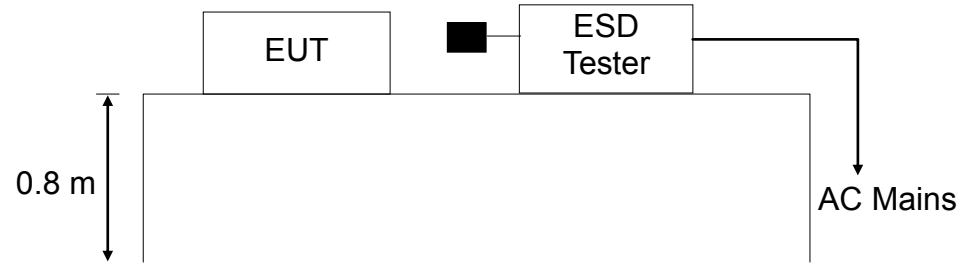
The power cord of the EUT is connected to the output of the test system. Turn on the power of the EUT and use the test system to test the harmonic current level.

6.5. Test Results

The EUT is powered by the DC only, the test item is not applicable.

7. ELECTROSTATIC DISCHARGE IMMUNITY TEST

7.1. Block Diagram of Test Setup



7.2. Test Standard

EN 55014-2:2015., EN 61000-4-2:2009

Severity Level: 3 / Air Discharge: ± 8 KV

Level: 2 / Contact Discharge: ± 4 KV

7.3. Severity Levels and Performance Criterion

7.3.1 Severity level

Level	Test Voltage Contact Discharge (KV)	Test Voltage Air Discharge (KV)
1.	± 2	± 2
2.	± 4	± 4
3.	± 6	± 8
4.	± 8	± 15
X	Special	Special

7.3.2 Performance criterion : B

- A.** The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as i

- B.** The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however, no change of actual operating state or stored data is allowed. 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 from what the user may reasonably expect from the apparatus if used as intended.

- C.** Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

7.4.EUT Configuration

The following equipments are installed on Electrostatic Discharge Immunity test to meet EN 55014-2:2015:, EN 61000-4-2:2009, requirement and operating in a manner which tends to maximize its emission characteristics in a normal application. The configuration of EUT is the same as used in conducted emission test.

Please refer to Section 2.4.

7.5.Operating Condition of EUT

Same as conducted emission measurement, which is listed in Section 3.5 except the test setup replaced by Section 7.1.2.

7.6.Test Procedure

7.6.1 Air Discharge:

This test is done on a non-conductive surface. The round discharge tip of the discharge electrode shall be approached as fast as possible to touch the EUT. After each discharge, the discharge electrode shall be removed from the EUT. The generator is then re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed.

7.6.2 Contact Discharge:

All the procedure shall be same as Section 7.6.1. Except that the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

7.6.3 Indirect discharge for horizontal coupling plane

At least 10 single discharges (in the most sensitive polarity) shall be applied at the front edge of each HCP opposite the center point of each unit (if applicable) of the EUT and 0.1m from the front of the EUT. The long axis of

the discharge electrode shall be in the plane of the HCP and perpendicular to its front edge during the discharge.

7.6.4 Indirect discharge for vertical coupling plane

At least 10 single discharges (in the most sensitive polarity) shall be applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m X 0.5m, is placed parallel to, and positioned at a distance of 0.1m from the EUT. Discharges shall be applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are complete illuminated.

7.7. Test Results

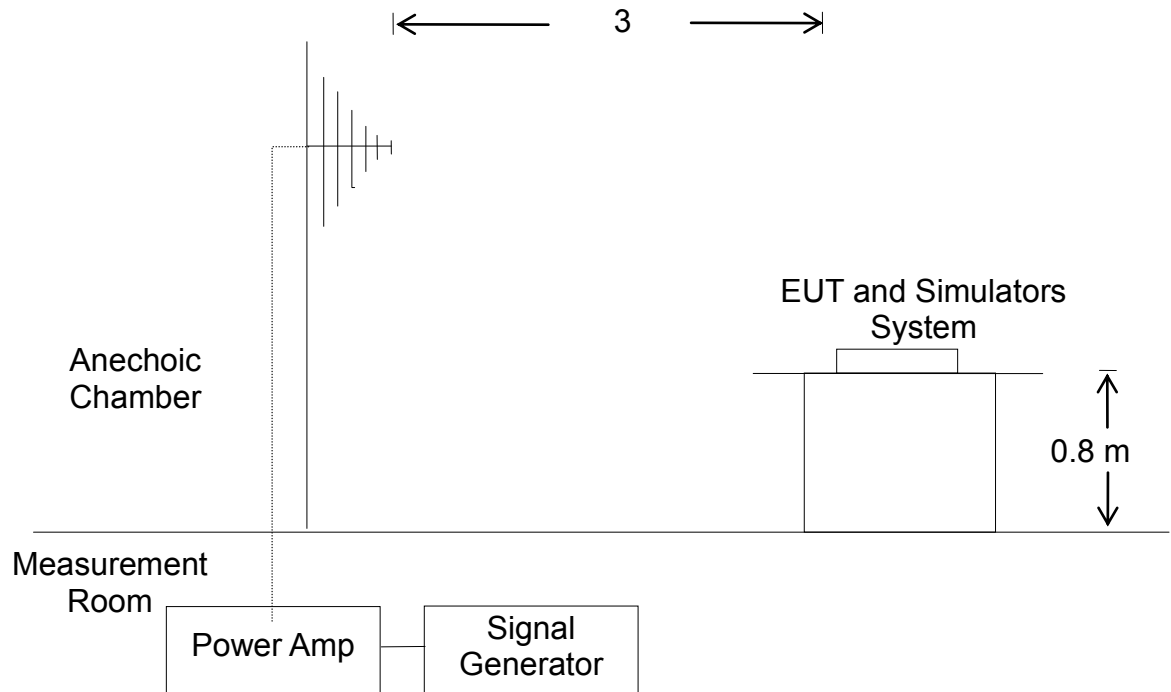
PASS

Please refer to the following page.

ESD Test Data				
Temperature:	24.5°C	Humidity:	53%	
Power Supply :	DC 3.7V	Test Mode:	Discharge	
Air Discharge: ± 8KV				
Contact Discharge: ± 4KV				
Test Points	Air Discharge	Contact Discharge	Performance Criterion	Result
Enclosure	±2,4,8KV	N/A	B	PASS
Slit	±2,4,8KV	N/A	B	PASS
Metal Part	N/A	±2,4 KV	B	PASS
VCP	N/A	±2,4 KV	B	PASS
HCP	N/A	±2,4 KV	B	PASS
Note: N/A				

8. RF FIELD STRENGTH SUSCEPTIBILITY TEST

8.1. Block Diagram of Test Setup



8.2. Test Standard

EN 55014-2:2015.,
EN 61000-4-3: 2006+A1:2008+A2:2010

Severity Level 2, 3V / m

8.3. Severity Levels and Performance Criterion

8.3.1. Severity level

Level	Field Strength V/m
1.	1
2.	3
3.	10
X.	Special

8.3.2. Performance criterion: A

- A、 The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as i
- B、 The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however, no change of actual operating state or stored data is allowed. 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 from what the user may reasonably expect from the apparatus if used as intended.
- C、 Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

8.4. EUT Configuration on Test

The following equipments are installed on RF FIELD STRENGTH SUSCEPTIBILITY TEST to meet EN 55014-2:2015:, EN 61000-4-3: 2006+A1:2008+A2:2010, requirement and operating in a manner which tends to maximize its emission characteristics in a normal application. The configuration of EUT is the same as used in conducted emission test.

Please refer to Section 3.4.

8.5. Operating Condition of EUT

Same as conducted emission measurement, which is listed in Section 2.5 except the test setup replaced by Section 8.1.

8.6. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. EUT is set 3 meter away from the transmitting antenna which is mounted on an antenna tower. Both horizontal and vertical polarization of the antenna are set on test. Each of the four sides of EUT must be faced this transmitting antenna and measured individually.

All the scanning conditions are as follows :

Condition of Test	Remarks
1. Fielded Strength	3 V/m (Severity Level 2)
2. Radiated Signal	Modulated
3. Scanning Frequency	80 – 1000 MHz
4. Dwell time of radiated	0.0015 decade/s
5. Waiting Time	1 Sec.

8.7. Test Results

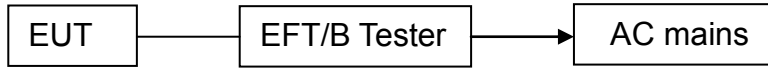
PASS

Please refer to the following page.

R/S Test Data			
Temperature : 25°C		Humidity : 53%	
Field Strength: 3 V/m		Criterion: A	
Power Supply: DC 3.7V		Frequency Range: 80 MHz to 1000 MHz	
Modulation: <input checked="" type="checkbox"/> AM <input type="checkbox"/> Pulse <input type="checkbox"/> none 1 KHz 80%			
Test Mode : Discharge			
Frequency Range : 80-1000MHz			
Steps	1 %		
	Horizontal	Vertical	Result
Front	A	A	Pass
Right	A	A	Pass
Rear	A	A	Pass
Left	A	A	Pass
Note: N/A			

9. ELECTRICAL FAST TRANSIENT/BURST IMMUNITY TEST

9.1. Block Diagram of EUT Test Setup



9.2. Test Standard

EN 55014-2:2015.; EN 61000-4-4:2012

9.3. Severity Levels and Performance Criterion

Severity Level 2 at 1KV, Pulse Rise time & Duration: 5 nS / 50 nS

Severity Level:

Open Circuit Output Test Voltage $\pm 10\%$		
Level	On power ports	On I/O(Input/Output) Signal data and control ports
1.	0.5KV	0.25KV
2.	1KV	0.5KV
3.	2KV	1KV
4.	4KV	2KV
X.	Special	Special

Performance criterion: B

- A. The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as i
- B. The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however, no change of actual operating state or stored data is allowed. 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 from what the user may reasonably expect from the apparatus if used as intended.
- C. Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

9.4.EUT Configuration on Test

The following equipments are installed on Electrical Fast Transient/Burst Immunity test to meet EN 55014-2:2015., EN 61000-4-4:2012, requirement and operating in a manner which tends to maximize its emission characteristics in a normal application. The configuration of EUT is the same as used in conducted emission test.

Please refer to Section 3.4.

9.5.Operating Condition of EUT

Same as conducted emission measurement, which is listed in Section 2.6 except the test setup replaced by Section 9.1.

9.6.Test Procedure

EUT shall be placed 0.8m high above the ground reference plane which is a min.1m*1m metallic sheet with 0.65mm minimum thickness. This reference ground plane shall project beyond the EUT by at least 0.1m on all sides and the minimum distance between EUT and all other conductive structure, except the ground plane beneath the EUT, shall be more than 0.5m

9.6.1. For input and output AC power ports:

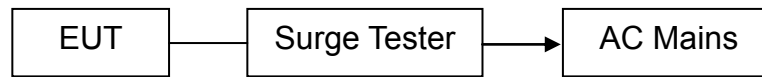
The EUT is connected to the power mains by using a coupling device which couples the EFT interference signal to AC power lines. Both polarities of the test voltage should be applied during compliance test and the duration of the test is 2 minutes.

9.7.Test Results

The EUT is powered by the DC only, the test item is not applicable.

10. SURGE TEST

10.1. Block Diagram of EUT Test Setup



10.2. Test Standard

EN 55014-2:2015., EN61000-4-5:2014

10.3. Severity Levels and Performance Criterion

Severity Level: Line to Line, Level 2 at 1KV;

Severity Level: Line to Earth, Level 3 at 2KV.

Severity Level	Open-Circuit Test Voltage (KV)
1.	0.5
2.	1.0
3.	2.0
4.	4.0
X.	Special

Performance criterion: B

- A. The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as i
- B. The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however, no change of actual operating state or stored data is allowed. 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 from what the user may reasonably expect from the apparatus if used as intended.
- C. Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

10.4. EUT Configuration on Test

The following equipments are installed on Electrical Fast Transient/Burst Immunity test to meet EN 55014-2:2015:, EN61000-4-5:2014, requirement and operating in a manner which tends to maximize its emission characteristics in a normal application

The configuration of EUT is the same as used in conducted emission test. Please refer to Section 3.4.

10.5. Operating Condition of EUT

Same as conducted emission measurement, which is listed in Section 2.7 except the test setup replaced by Section 10.1.

10.6. Test Procedure

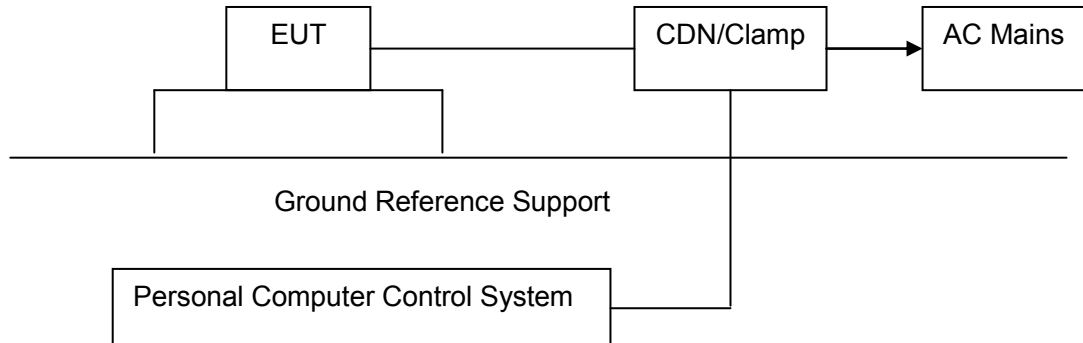
- 1) Set up the EUT and test generator as shown on section 10.1
- 2) For line to line coupling mode, provide a 1KV 1.2/50us voltage surge (at open-circuit condition) and 8/20us current surge to EUT selected points.
- 3) At least 5 positive and 5 negative (polarity) tests with a maximum 1/min repetition rate are conducted during test.
- 4) Different phase angles are done individually.
- 5) Repeat procedure 2) to 4) except the open-circuit test voltage change from 1KV to 2KV for line to earth coupling mode test.
- 6) Record the EUT operating situation during compliance test and decide the EUT immunity criterion for above each test.

10.7. Test Result

The EUT is powered by the DC only, the test item is not applicable.

11. INJECTED CURRENTS SUSCEPTIBILITY TEST

11.1. Block Diagram of EUT Test Setup



11.2. Test Standard

EN 55014-2:2015., EN61000-4-6:2014

11.3. Severity Levels and Performance Criterion

Severity Level 2: 3V(rms), 150KHz ~ 80MHz

Severity Level:

Level	Field Strength V
1.	1
2.	3
3.	10
X.	Special

Performance criterion: A

- A. The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as i
- B. The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however, no change of actual operating state or stored data is allowed. 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 from what the user may reasonably expect from the apparatus if used as intended.

- C. Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

11.4. EUT Configuration on Test

The configuration of EUT is the same as used in conducted emission test. Please refer to Section 2.8.

11.5. Operating Condition of EUT

Same as conducted emission test, which is listed in Section 2.8 except the test set up replaced as Section 11.1.

11.6. Test Procedure

- 1) Set up the EUT, CDN and test generator as shown on section 11.1
- 2) Let EUT work in test mode and measure.
- 3) The EUT and supporting equipments are placed on an insulating support 0.1m high above a ground reference plane. CDN (coupling and decoupling device) is placed on the ground plane at above 0.1-0.3m from EUT. Cables between CDN and EUT are as short as possible, and their height above the ground reference plane shall be between 30 and 50 mm (where possible).
- 4) The disturbance signal described below is injected to EUT through CDN.
- 5) The EUT operates within its operational mode(s) under intended climatic conditions after power on.
- 6) The frequency range is swept from 150KHz to 80MHz using 3V signal level, and with the disturbance signal 80% amplitude modulated with a 1KHz sine wave
- 7) The rate of sweep shall not exceed 1.5×10^{-3} decades/s. Where the frequency is swept incrementally, the step size shall not exceed 1% of the start and thereafter 1% of the preceding frequency value.
- 8) Recording the EUT operating situation during compliance test and decide the EUT immunity criterion for above each test.

11.7. Test Result

The EUT is powered by the DC only, the test item is not applicable.

12. VOLTAGE DIPS AND INTERRUPTIONS TEST

12.1. Block Diagram of EUT Test Setup



12.2. Test Standard

EN 55014-2:2015., EN61000-4-11:2004

12.3. Severity Levels and Performance Criterion

Severity Level:

Input and Output AC Power Ports.

- Voltage Dips.
- Voltage Interruptions.

Environmental Phenomena	Test Specification	Units	Performance Criterion
Voltage Dips	70 25	% Reduction period	C
	40 10	% Reduction period	C
Voltage Interruptions	0 0.5	% Reduction period	C

Performance criterion: B, C, C

- A. The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as i
- B. The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however, no change of actual operating state or stored data is allowed. 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 from what the user may reasonably expect from the apparatus if used as intended.

- C. Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

12.4. EUT Configuration on Test

The configuration of EUT is the same as used in conducted emission test. Please refer to Section 2.10.

12.5. Operating Condition of EUT

Same as conducted emission test, which is listed in Section 2.10 except the test set up replaced as Section 13.1.

12.6. Test Procedure

- 1) Set up the EUT and test generator as shown on section 13.1
- 2) The interruption is introduced at selected phase angles with specified duration. There is a 3mins minimum interval between each test event.
- 3) After each test a full functional check is performed before the next test.
- 4) Repeat procedures 2 & 3 for voltage dips, only the level and duration is changed.
- 5) Record any degradation of performance.

12.7. Test Result

The EUT is powered by the DC only, the test item is not applicable.

13. EUT PHOTOGRAPHS

EUT Photo 1



EUT Photo 2



EUT Photo 3



EUT Photo 4



EUT Photo 5



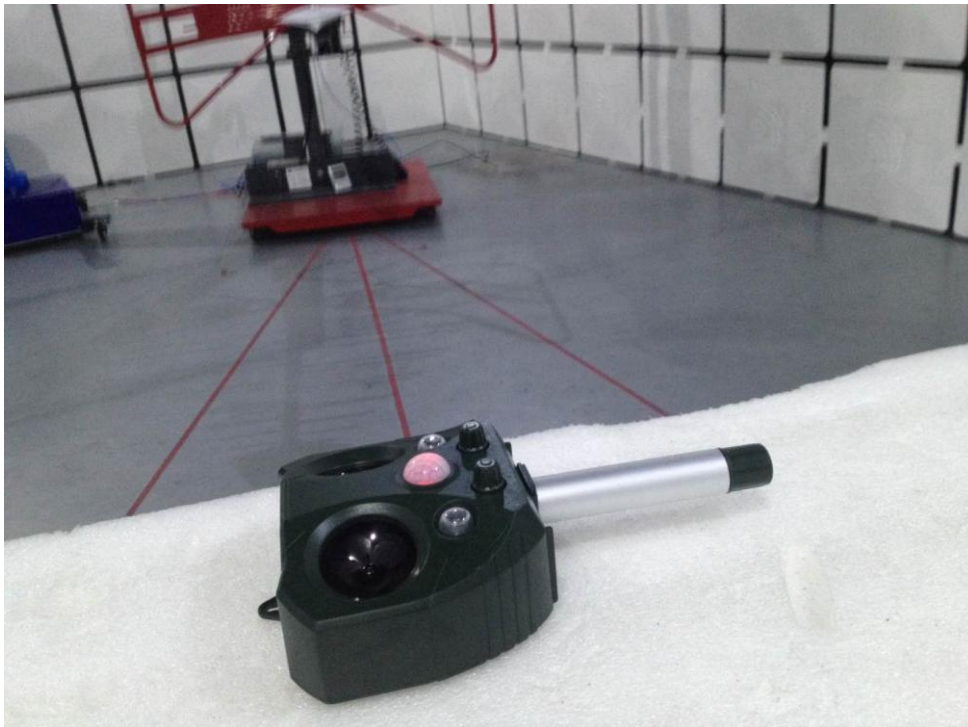
EUT Photo 6



EUT Photo 7



EUT Photo 8



***** END OF REPORT *****

FCC TEST REPORT

For
Shenzhen Saijinzhi Technology Co.,Ltd.

Product Name : Solar animal drives

Trademark : SAIJINZHI

Model Number : SJZ-668A

Prepared For : Shenzhen Saijinzhi Technology Co.,Ltd.

Address : Room 301, Building 9, Yuanling Industrial Park, Shiyan
Street, Bao'an District, Shenzhen.

Report No. : LST180523013FR

Testing laboratory : Shenzhen LST Technology Co., Ltd.

Address : 2/F, Huichao Building, Yintian Industry zone, Bao'an
District, Shenzhen, Guangdong P.R. China

Applicant : Shenzhen Saijinzhi Technology Co.,Ltd.
Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.
Manufacturer : Shenzhen Saijinzhi Technology Co.,Ltd.
Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.
EUT : Solar animal drives
Model Number : SJZ-668A
Trademark: : SAIJINZHI
Test Date : May.22.2018 – May.28.2018
Date of Report : May.28.2018
Test Result: : The equipment under test was found to be compliance with the requirements of the standards applied.

Test Procedure Used:

FCC Part 15 B

ANSI C63.4:2014

Tested by (name + signature):

Reviewed by (name + signature):

Approved by (name + signature)



This test report is based on a single evaluation of one sample of above mentioned products. The test results in the report only apply to the tested sample. It is not permitted to be duplicated in extracts without written approval of Shenzhen LST Technology Co., Ltd.

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT : Solar animal drives
Trademark : SAIJINZHI
Model Number : SJZ-668A
Power Supply : DC 5V, 500mA

1.2. Tested System Details

None.

1.3. Test Uncertainty

Conducted Emission Uncertainty : ± 1.82 dB

Radiated Emission Uncertainty : ± 2.51 dB

1.4. Test Facility

Site Description :

Name of Firm : Shenzhen LST Technology Co., Ltd.

Address : 2/F, Huichao Building, Yintian Industry zone, Bao'an District, Shenzhen, Guangdong P.R. China

2. TEST INSTRUMENT USED

For Conducted Emission at the mains terminals Test

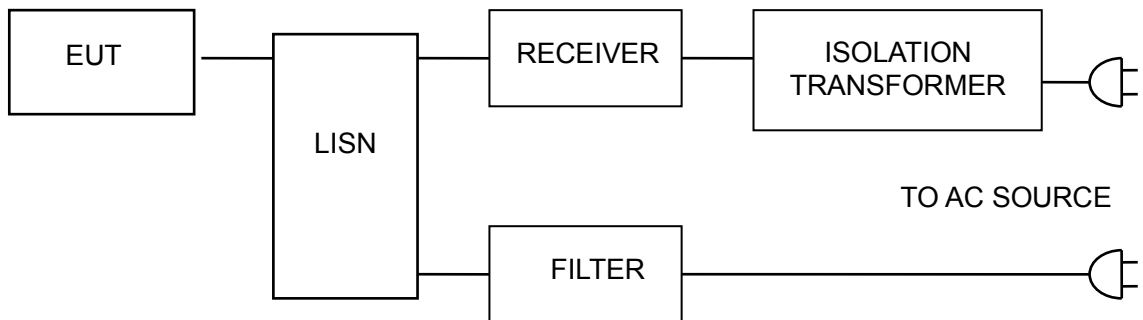
Conducted Emission Test (A --- site)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
843 Shielded Room	ChengYu	843 Room	843	Aug. 25, 2017	Aug. 24, 2018
EMI Receiver	R&S	ESCI	101421	Aug. 27, 2017	Aug. 26, 2018
LISN	Schwarzbeck	NSLK8127	8127739	Sep. 07, 2017	Sep. 06, 2018
Attenuator	R&S	ESH3-Z2	LST021E	Aug. 25, 2017	Aug. 24, 2018
843 Cable 1#	FUJIKURA	843C1#	001	Aug. 25, 2017	Aug. 24, 2018

For Radiated Emission Test

Radiation Emission Test (966 chamber)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	Aug. 25, 2017	Aug. 24, 2018
Spectrum Analyzer	Agilent	E4407B	MY45109572	Aug. 27, 2017	Aug. 26, 2018
Amplifier	Schwarzbeck	BBV9743	9743-119	Aug. 25, 2017	Aug. 24, 2018
Amplifier	Schwarzbeck	BBV9718	9718-270	Aug. 25, 2017	Aug. 24, 2018
Log-periodic Antenna	Schwarzbeck	VULB9160	VULB9160-3369	Sep. 07, 2017	Sep. 06, 2018
EMI Receiver	R&S	ESCI	101421	Aug. 27, 2017	Aug. 26, 2018
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1275	Aug. 25, 2017	Aug. 24, 2018
966 Cable 1#	CHENGYU	966	004	Aug. 25, 2017	Aug. 24, 2018
966 Cable 2#	CHENGYU	966	003	Aug. 25, 2017	Aug. 24, 2018

3. CONDUCTED EMISSION AT THE MAINS TERMINALS TEST

1.1. Block Diagram Of Test Setup



1.2. Test Standard

FCC PART 15 B

1.3. Power Line Conducted Emission Limit

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 ~ 30.00	60	50

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

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

1.4. EUT Configuration on Test

The following equipments are installed on conducted emission test to meet FCC PART 15 B requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

1.5. Operating Condition of EUT

3.5.1 Setup the EUT and simulators as shown in Section 3.1.

3.5.2 Turn on the power of all equipments.

3.5.3 Let the EUT work in test modes and test it.

1.6. Test Procedure

The EUT is put on the ground and connected to the AC mains through a Artificial Mains Network (AMN). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are checked to find out the maximum conducted emission levels according to the **FCC PART 15 B** regulations during conducted emission test.

The bandwidth of the test receiver (R&S Test Receiver ESCI) is set at 10KHz.

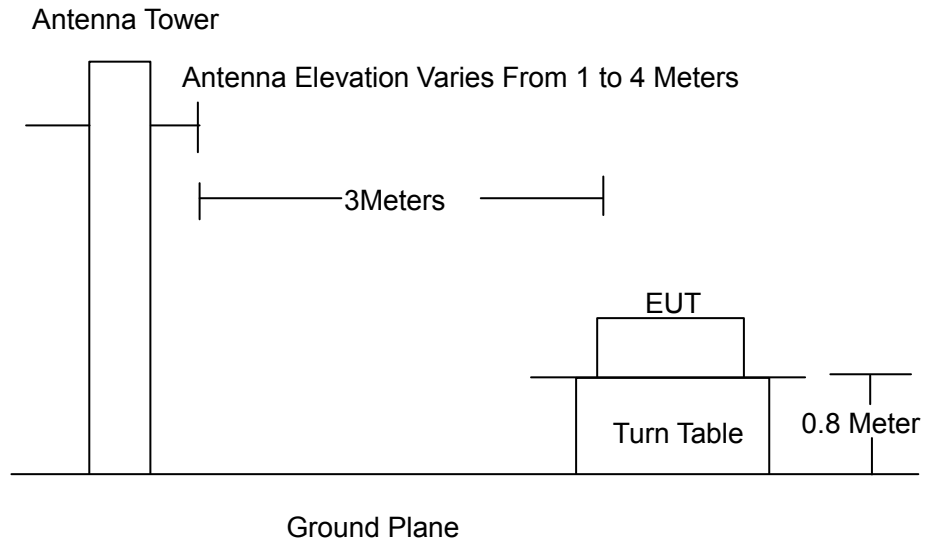
The frequency range from 150 KHz to 30 MHz is investigated.

1.7. Test Result

The EUT is powered by the DC only, the test item is not applicable.

4. RADIATION EMISSION TEST

2.1. Block Diagram of Test Setup



2.2. Test Standard

FCC PART 15 B

2.3. Radiation Limit

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dB μ V/m)
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

2.4. EUT Configuration on Test

The FCC PART 15 B regulations test method must be used to find the maximum emission during radiated emission test.

The configuration of EUT is the same as used in conducted emission test. Please refer to Section 2.2.

2.5. Operating Condition of EUT

Same as conducted emission test, which is listed in Section 2.2 except the test set up replaced as Section 4.1.

2.6. Test Procedure

The EUT and its simulators are placed on a turned table that is 0.8 meter above the ground. The turned table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna that is mounted on the antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated biconical and log periodical antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on test. In order to find the maximum emission levels, the interface cable must be manipulated according to FCC PART 15 B on radiated emission test.

The bandwidth setting on the field strength meter (R&S Test Receiver ESCI) is set at 120KHz below 1GHz, set at 1MHz above 1GHz

The frequency range from 30MHz to 1000MHz is checked.

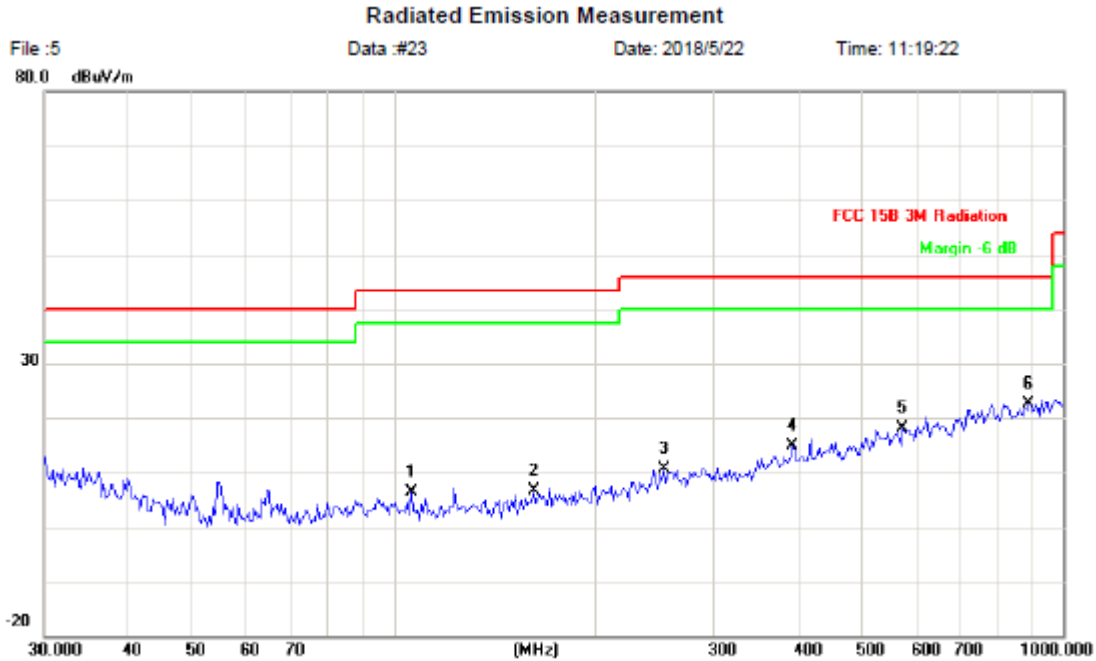
The highest frequency of the internal sources of the EUT was below 108MHz, so the measurement was only made up to 1GHz.

2.7. Test Result

PASS

Please refer to the following page.

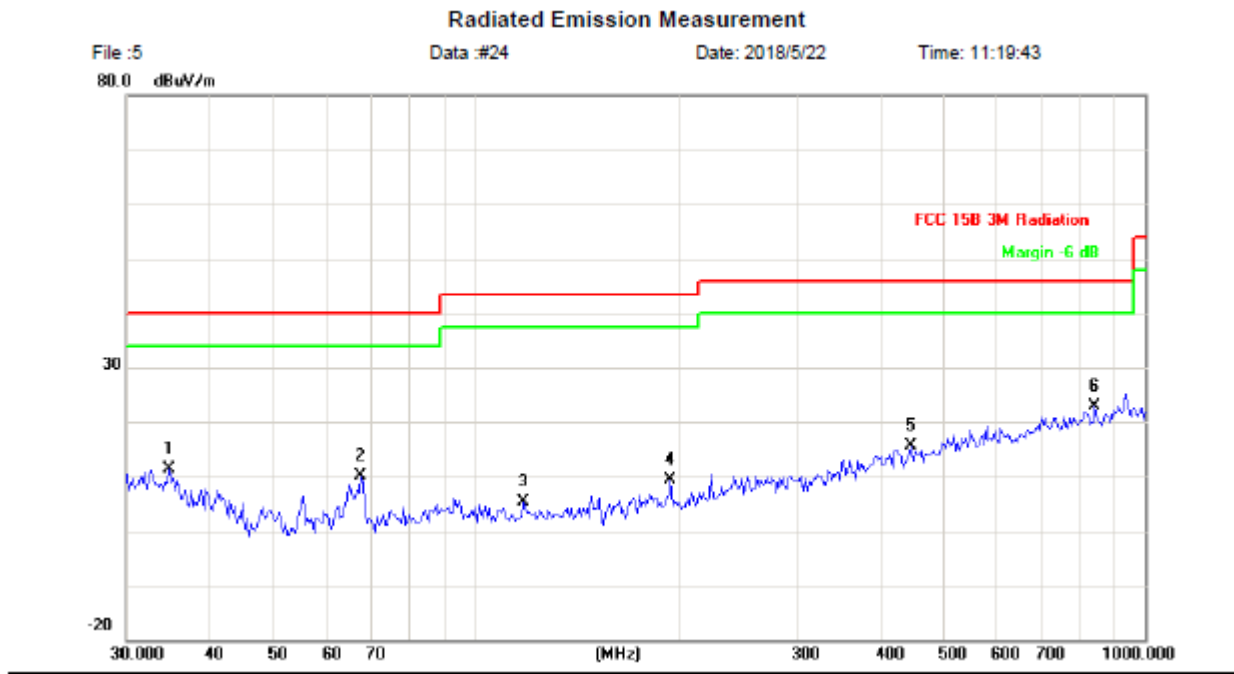
Radiation Emission Test Data			
Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Phase :	Horizontal
Test Voltage :	DC5V	Test Mode:	Data transmission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		106.0126	28.66	-22.31	6.35	43.50	-37.15	peak		
2		161.4742	27.50	-20.83	6.67	43.50	-36.83	peak		
3		252.9482	27.79	-17.12	10.67	46.00	-35.33	peak		
4		393.4723	27.34	-12.57	14.77	46.00	-31.23	peak		
5		574.6258	26.84	-8.82	18.02	46.00	-27.98	peak		
6	*	887.6099	26.72	-4.08	22.64	46.00	-23.36	peak		

*:Maximum data x:Over limit !:over margin

Radiation Emission Test Data			
Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Phase :	Vertical
Test Voltage :	AC 110V	Test Mode:	Data transmission



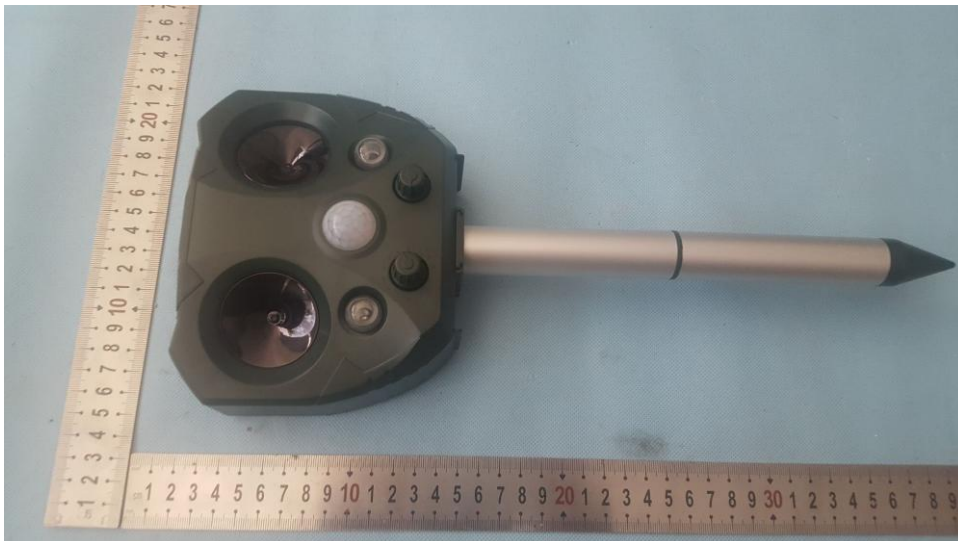
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dB/m	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1	34.7602	27.90	-16.57	11.33	40.00	-28.67	peak			
2	67.2022	33.78	-23.74	10.04	40.00	-29.96	peak			
3	117.7725	27.75	-22.32	5.43	43.50	-38.07	peak			
4	195.1365	29.32	-19.88	9.44	43.50	-34.06	peak			
5	446.4141	27.68	-12.00	15.68	46.00	-30.32	peak			
6 *	839.1818	28.42	-5.53	22.89	46.00	-23.11	peak			

ANNEX A:
Photo-documentation

EUT Photo 1



EUT Photo 2



EUT Photo 3



EUT Photo 4



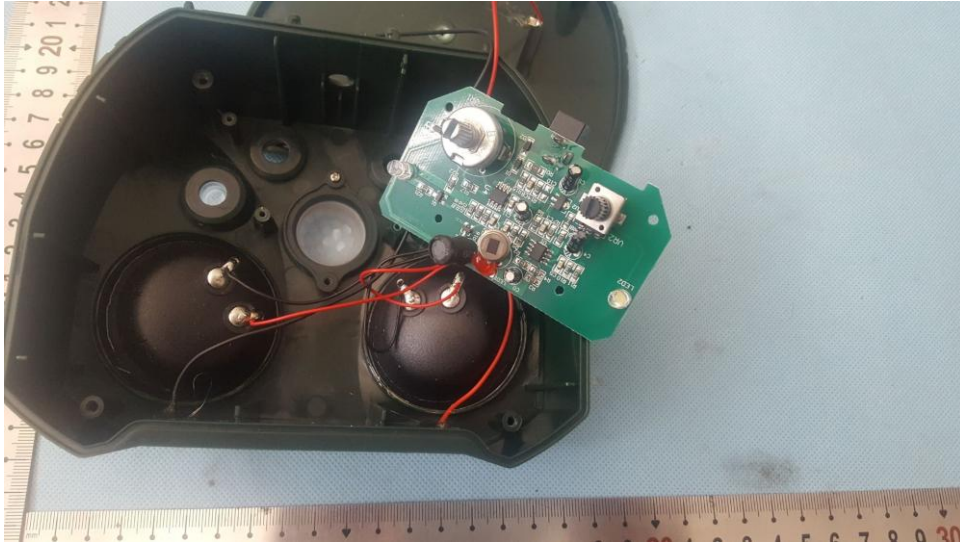
EUT Photo 5



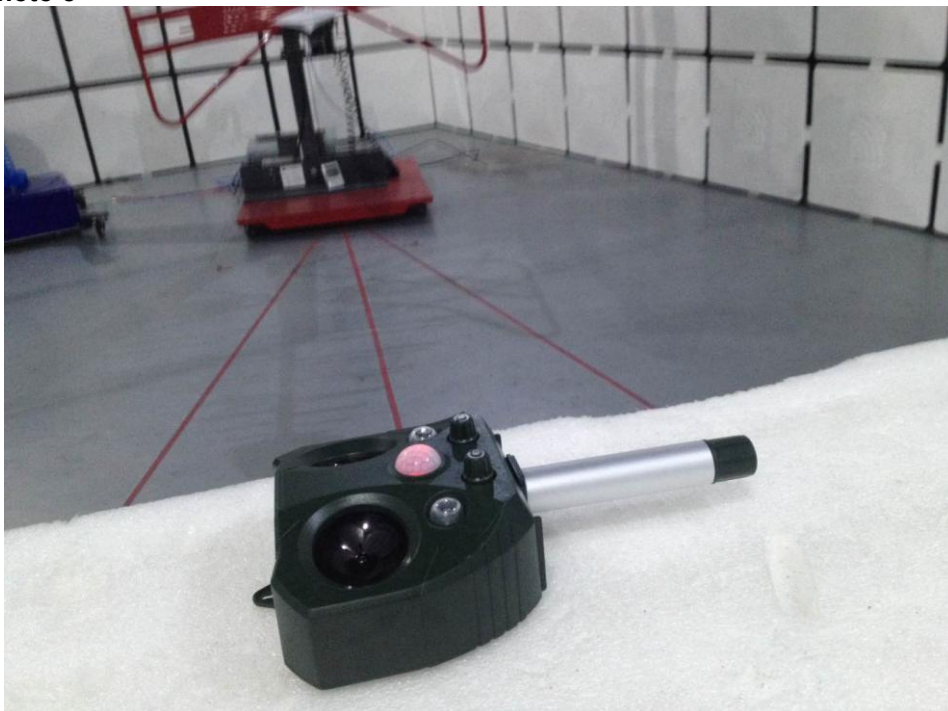
EUT Photo 6



EUT Photo 7



EUT Photo 8



***** END OF REPORT *****

LST

Shenzhen LST Technology Co.,Ltd.

HOTLINE: 400-096-8018

WWW.LST-LAB.COM

Certificate of Compliance

Certificate No. : LST180523013F
Applicant : Shenzhen Saijinzhi Technology Co.,Ltd.
Applicant Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.
Manufacturer : Shenzhen Saijinzhi Technology Co.,Ltd.
Manufacturer Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.
Product : Solar animal drives
M/N : SJZ-668A
Trademark : SAIJINZHI
Test Standard :

The submitted sample of the equipment has been tested and found to comply with the following standards:

- FCC Part 15 B
- ANSI C63.4:2014

This verification is part of the full test report(s) and should be read in conjunction with it. The referred test report(s) show that the product complies with standard(s) recognized as giving presumption of compliance with the essential requirements in the specified FCC standard. This Verification does not imply assessment of the production of the product. It is only valid in connection with the test report number: LST180523013FR.

FCC



Manager

Issue Date: May. 28, 2018

LST

Shenzhen LST Technology Co.,Ltd.

HOTLINE: 400-096-8018

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Certificate of Compliance

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Test Standard :

The submitted sample of the equipment has been tested and found to comply with the following standards:

- FCC Part 15 B
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FCC



Manager

Issue Date: May. 28, 2018

RoHS Consolidated Test Report

SAMPLE INFORMATION:

Sample Description : **Solar animal drives**
Trademark : **SAIJINZHI**
Model Number : **SJZ-668A**
Manufacturer : **Shenzhen Saijinzhi Technology Co.,Ltd.**
Manufacturer Address : **Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.**

CLIENT INFORMATION:

Applicant : **Shenzhen Saijinzhi Technology Co.,Ltd.**
Applicant Address : **Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.**
Test Standard : **IEC62321-1: 2013**
Comment : **The data shown in this consolidated test report did not exceed the limits of RoHS Directive 2011/65/EU, and its amendment directives.**
Issue Date : **May. 28, 2018**

REMARKS:

1. The test data obtained and the report issued by laboratories other than LST are provided by the applicant to us for data consolidation purposes. The report shall not be reproduced in part without written approval of us.
2. Characterization & Condition of sample: Normal.
3. The test results in the report only apply to the tested sample.

Approved by: _____

Date: May. 28, 2018

RoHS Consolidated Test Report

No.	Component	Test Lab	Report No.& Issue Date	Test Data(ppm)
01	WIRE	SGS	GZ1103022223A/CHEM 2017-04-20	Cd: N.D. Pb: N.D. Hg: N.D. Cr ⁶⁺ : N.D. PBBS: N.D. PBDES: N.D.
02	METAL	SGS	SHAEC1403165812 2017-04-03	Cd: N.D. Pb: N.D. Hg: N.D. Cr ⁶⁺ :N.D. PBBS: N.D. PBDES: N.D.
03	SMD RESISTOR	SGS	CANEC1317975404 2017-11-25	Cd: N.D. Pb: N.D. Hg: N.D. Cr ⁶⁺ : N.D. PBBS: N.D. PBDES: N.D.
04	PCB	SGS	GZ0901013303/CHEM DATE:2017/10/13	CD: N.D PB: N.D HG: N.D Cr ⁶⁺ :N D PBBS: ND PBDES: ND
05	CAPACITANCE	SGS	GZ0903037330/CHEM DATE:2017/11/04	CD: N.D PB: N.D HG: N.D Cr ⁶⁺ :N D PBBS: ND PBDES: ND

RoHS Consolidated Test Report

No.	Component	Test Lab	Report No.& Issue Date	Test Data(ppm)
06	DIODE	SGS	GZ0901009418/CHEM DATE:2016/10/18	CD: N.D PB: N.D HG: N.D Cr ⁶⁺ :N D PBBS: ND PBDES: ND
07	SOLAR PANEL	SGS	SH8142216/CHEM DATE:2016/10/28	CD: N.D PB: N.D HG: N.D Cr ⁶⁺ :N D PBBS: ND PBDES: ND
08	FUSE	SGS	CANEC0801173702 DATE:2017/10/25	CD: N.D PB: N.D HG: N.D Cr ⁶⁺ :N D PBBS: ND PBDES: ND
09	IC	SGS	KA/2013/02097 DATE:2016/10/12	CD: N.D PB: N.D HG: N.D Cr ⁶⁺ :N D PBBS: ND PBDES: ND
10	RESISTOR	SGS	SH7093218/CHEM DATE:2016/10/03	CD: N.D PB: N.D HG: N.D Cr ⁶⁺ :N D PBBS: ND PBDES: ND
11	LABEL	SGS	SH8078290-1/CHEM DATE:2016/11/03	Cd: N.D Pb: N.D Hg: N.D Cr ⁶⁺ :N D PBBS: ND PBDES: ND

RoHS Consolidated Test Report

NOTE:

- (1) Pb Limit=1000mg/kg, Cd Limit=100mg/kg, Hg Limit=1000mg/kg;
Cr⁶⁺ Limit=1000mg/kg ; PBBs Limit=1000mg/kg, PBDEs Limit=1000mg/kg
- (2) N.D. = not detected (<MDL)
- (3) MDL=Method Detection Limit
- (4) ppm = mg/kg
- (5) Conclusion:

The results shown on the report do not exceed the limit of the council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment under directive 2011/65/EU of the European parliament.

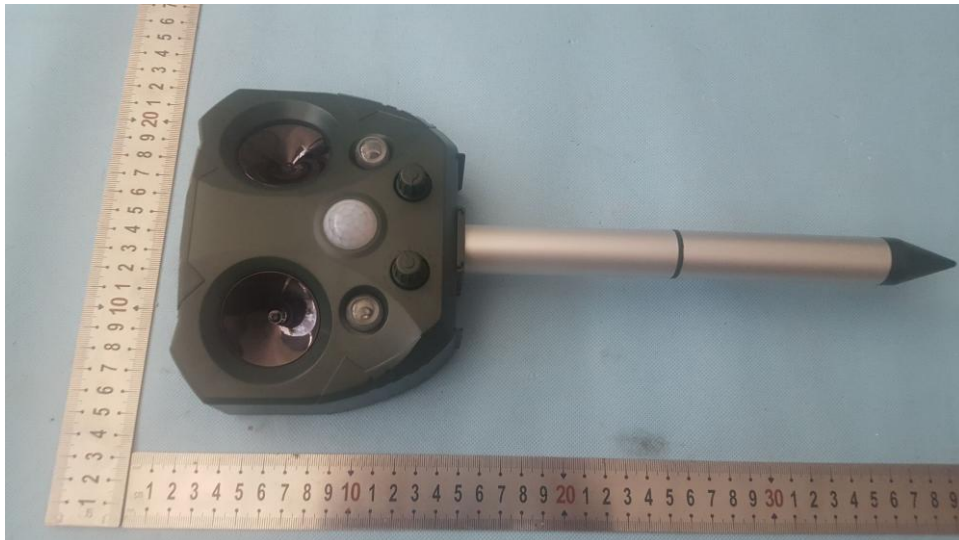
P=PASS

ND=NOT DETECTED

Ppm=PARTS PER MILLION

RoHS Consolidated Test Report

ANNEX A: Photo-documentation

EUT Photo 1**EUT Photo 2**

RoHS Consolidated Test Report

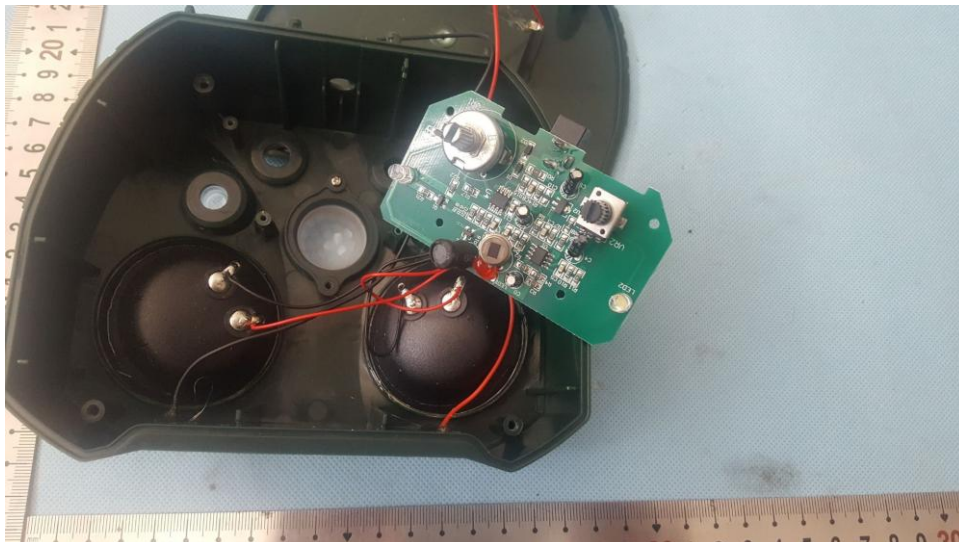
EUT Photo 3



EUT Photo 4



RoHS Consolidated Test Report

EUT Photo 6**EUT Photo 7**

***** END OF REPORT *****

LST

Shenzhen LST Technology Co.,Ltd.

HOTLINE: 400-096-8018

WWW.LST-LAB.COM

Certificate of Compliance

Certificate No. : LST180523013P
Applicant : Shenzhen Saijinzhi Technology Co.,Ltd.
Applicant Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.
Manufacturer : Shenzhen Saijinzhi Technology Co.,Ltd.
Manufacturer Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.
Product : Solar animal drives
M/N : SJZ-668A
Trademark : SAIJINZHI
Test Standard : J55014(H20)

The EUT described above has been tested by us with the listed standards and found in compliance with the Electrical Appliance and Material Control Law. It is possible to use PSE marking to demonstrate the compliance with this Law. It is only valid in connection with the test report number: LST180523013PR



Manager

Issue Date: May.28, 2018

LST

Shenzhen LST Technology Co.,Ltd.

HOTLINE: 400-096-8018

WWW.LST-LAB.COM

Certificate of Compliance

Certificate No. : LST180523013R
Applicant : Shenzhen Saijinzhi Technology Co.,Ltd.
Applicant Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.
Manufacturer : Shenzhen Saijinzhi Technology Co.,Ltd.
Manufacturer Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.
Product : Solar animal drives
M/N : SJZ-668A
Trademark : SAIJINZHI
Test Standard : IEC62321-1:2013

The EUT described above has been consolidated by us and found in compliance with the council RoHS directive—2011/65/EU. It is possible to use CE marking to demonstrate the compliance with this RoHS Directive. It is only valid in connection with the test report number: LST180523013RR.

RoHS


Manager



Issue Date: May 28, 2018

Tel: +86 4000968018 Fax: +86 75529410823
4/F, Huichao Building, Yintian Industry zone, Bao'an District, Shenzhen China
www.lst-lab.com E-mail: lst_lab@126.com

LST

Shenzhen LST Technology Co.,Ltd.

HOTLINE: 400-096-8018

WWW.LST-LAB.COM

Certificate of Compliance

Certificate No. : LST180523013R
Applicant : Shenzhen Saijinzhi Technology Co.,Ltd.
Applicant Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.
Manufacturer : Shenzhen Saijinzhi Technology Co.,Ltd.
Manufacturer Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.
Product : Solar animal drives
M/N : SJZ-668A
Trademark : SAIJINZHI
Test Standard : IEC62321-1:2013

The EUT described above has been consolidated by us and found in compliance with the council RoHS directive—2011/65/EU. It is possible to use CE marking to demonstrate the compliance with this RoHS Directive. It is only valid in connection with the test report number: LST180523013RR.

RoHS



Issue Date: May 28, 2018



TEST REPORT

For
Shenzhen Saijinzhi Technology Co.,Ltd.

Product Name : Solar animal drives

Trademark : SAIJINZHI

Model Number : SJZ-668A

Prepared For : Shenzhen Saijinzhi Technology Co.,Ltd.

Address : Room 301, Building 9, Yuanling Industrial Park, Shiyan
Street, Bao'an District, Shenzhen.

Report No. : LST180523013PR

Testing laboratory : Solar animal drives

Address : Huichao Building, Yintian Industry zone,
Banan District, Shenzhen, Guangdong P.R. China

Applicant : Shenzhen Saijinzhi Technology Co.,Ltd.
Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.
Manufacturer : Shenzhen Saijinzhi Technology Co.,Ltd.
Address : Room 301,Building 9,Yuanling Industrial Park,Shiyan Street,Bao'an District,Shenzhen.
EUT : Solar animal drives
Model Number : SJZ-668A
Trademark: : SAIJINZHI
Test Date : May. 22, 2018 – May. 28, 2018
Date of Report : May. 28, 2018
Test Result: : The equipment under test was found to be compliance with the requirements of the standards applied.

Test Procedure Used:

J55014(H20)

Tested by (name + signature): *Jandi*

Reviewed by (name + signature): *Dany*

Approved by (name + signature): *Francis*



This test report is based on a single evaluation of one sample of above mentioned products. The test results in the report only apply to the tested sample. It is not permitted to be duplicated in extracts without written approval of Shenzhen LST Technology Co., Ltd.

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT : Solar animal drives
Trademark : SAIJINZHI
Model Number : SJZ-668A
Power Supply : DC 5V, 500mA

1.2. Tested System Details

None.

1.3. Test Uncertainty

Conducted Emission Uncertainty : ± 1.82 dB

Radiated Emission Uncertainty : ± 2.51 dB

1.4. Test Facility

Site Description :

Name of Firm : Shenzhen LST Technology Co., Ltd.

Address : Huichao Building, Yintian Industry zone, Banan District, Shenzhen, Guangdong P.R. China

2. TEST INSTRUMENT USED

For Conducted Emission at the mains terminals Test

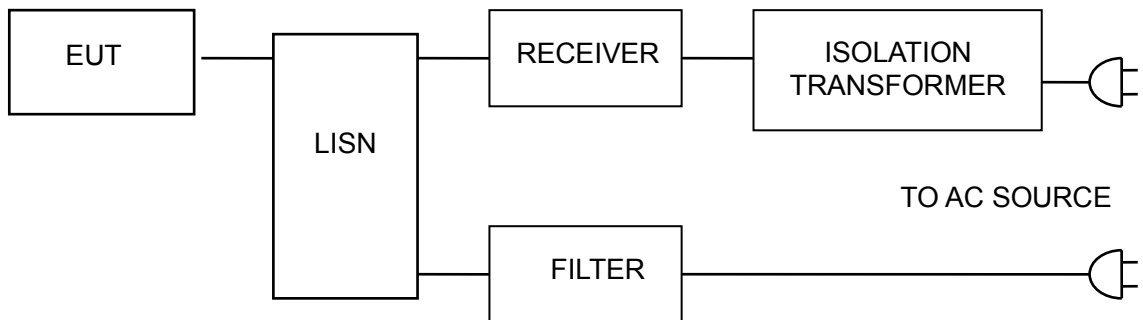
Conducted Emission Test (A --- site)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
843 Shielded Room	ChengYu	843 Room	843	Aug. 25, 2017	Aug. 24, 2018
EMI Receiver	R&S	ESCI	101421	Aug. 27, 2017	Aug. 26, 2018
LISN	Schwarzbeck	NSLK8127	8127739	Sep. 07, 2017	Sep. 06, 2018
Attenuator	R&S	ESH3-Z2	LST021E	Aug. 25, 2017	Aug. 24, 2018
843 Cable 1#	FUJIKURA	843C1#	001	Aug. 25, 2017	Aug. 24, 2018

For Radiated Emission Test

Radiation Emission Test (966 chamber)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	Aug. 25, 2017	Aug. 24, 2018
Spectrum Analyzer	Agilent	E4407B	MY45109572	Aug. 27, 2017	Aug. 26, 2018
Amplifier	Schwarzbeck	BBV9743	9743-119	Aug. 25, 2017	Aug. 24, 2018
Amplifier	Schwarzbeck	BBV9718	9718-270	Aug. 25, 2017	Aug. 24, 2018
Log-periodic Antenna	Schwarzbeck	VULB9160	VULB9160-3369	Sep. 07, 2017	Sep. 06, 2018
EMI Receiver	R&S	ESCI	101421	Aug. 27, 2017	Aug. 26, 2018
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1275	Aug. 25, 2017	Aug. 24, 2018
966 Cable 1#	CHENGYU	966	004	Aug. 25, 2017	Aug. 24, 2018
966 Cable 2#	CHENGYU	966	003	Aug. 25, 2017	Aug. 24, 2018

3. CONDUCTED EMISSION AT THE MAINS TERMINALS TEST

1.1. Block Diagram Of Test Setup



1.2. Test Standard

J55014(H20)

1.3. Power Line Conducted Emission Limit

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 ~ 30.00	60	50

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

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

1.4. EUT Configuration on Test

The following equipments are installed on conducted emission test to meet J55014(H20) requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

1.5. Operating Condition of EUT

3.5.1 Setup the EUT and simulators as shown in Section 3.1.

3.5.2 Turn on the power of all equipments.

3.5.3 Let the EUT work in test modes and test it.

1.6. Test Procedure

The EUT is put on the ground and connected to the AC mains through a Artificial Mains Network (AMN). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are checked to find out the maximum conducted emission levels according to the **J55014(H20)** regulations during conducted emission test.

The bandwidth of the test receiver (R&S Test Receiver ESCI) is set at 10KHz.

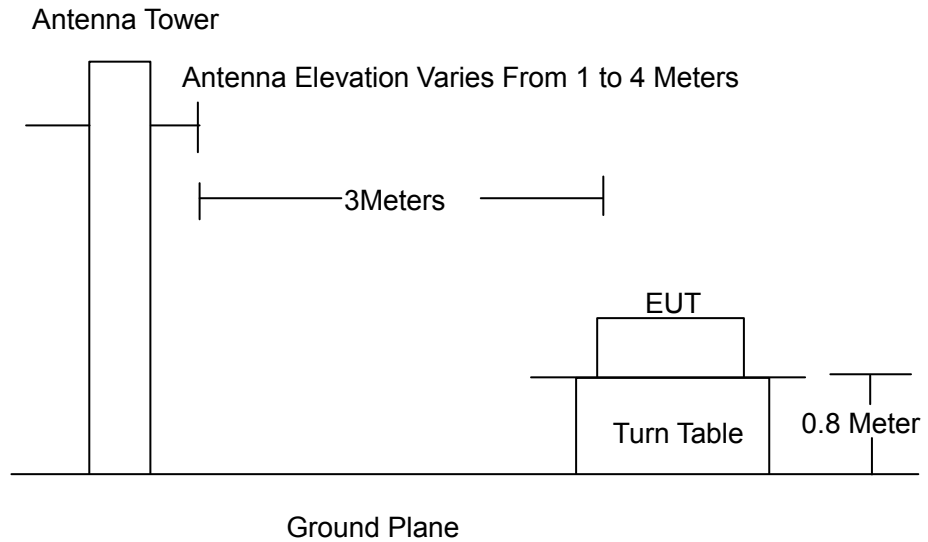
The frequency range from 150 KHz to 30 MHz is investigated.

1.7. Test Result

The EUT is powered by the DC only, the test item is not applicable.

4. RADIATION EMISSION TEST

2.1. Block Diagram of Test Setup



2.2. Test Standard

J55014(H20)

2.3. Radiation Limit

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dB μ V/m)
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

2.4. EUT Configuration on Test

The J55014(H20) regulations test method must be used to find the maximum emission during radiated emission test.

The configuration of EUT is the same as used in conducted emission test. Please refer to Section 2.2.

2.5. Operating Condition of EUT

Same as conducted emission test, which is listed in Section 2.2 except the test set up replaced as Section 4.1.

2.6. Test Procedure

The EUT and its simulators are placed on a turned table that is 0.8 meter above the ground. The turned table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna that is mounted on the antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated biconical and log periodical antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on test. In order to find the maximum emission levels, the interface cable must be manipulated according to J55014(H20) on radiated emission test.

The bandwidth setting on the field strength meter (R&S Test Receiver ESCI) is set at 120KHz below 1GHz, set at 1MHz above 1GHz

The frequency range from 30MHz to 1000MHz is checked.

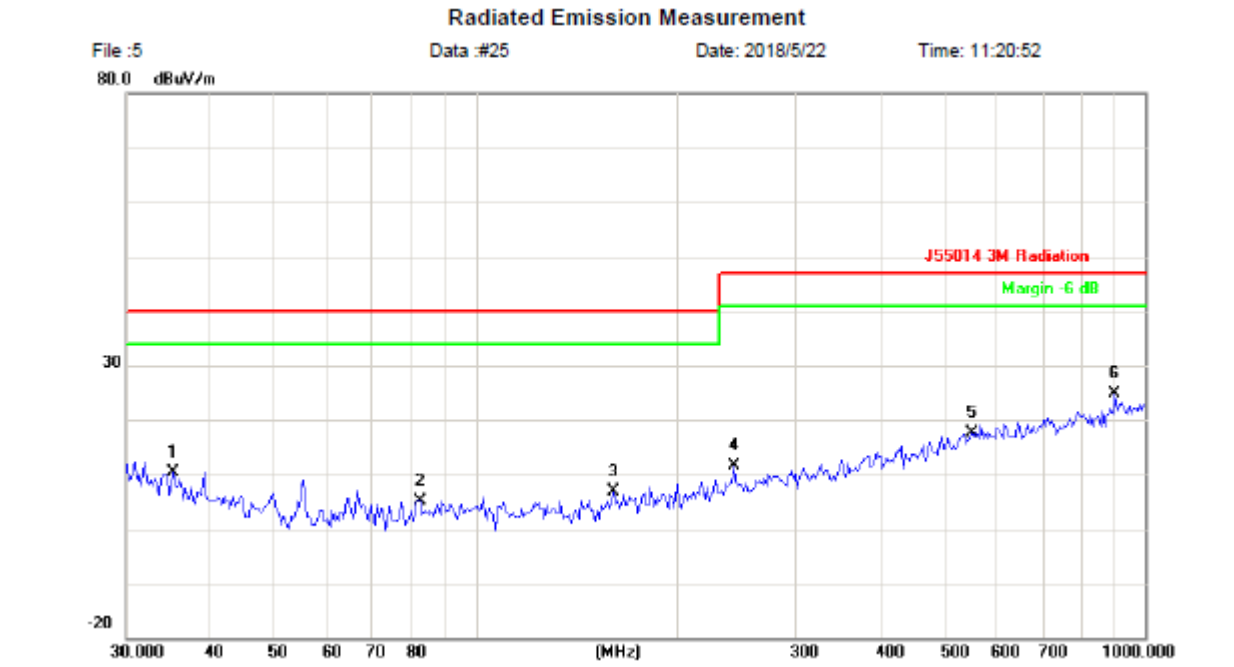
The highest frequency of the internal sources of the EUT was below 108MHz, so the measurement was only made up to 1GHz.

2.7. Test Result

PASS

Please refer to the following page.

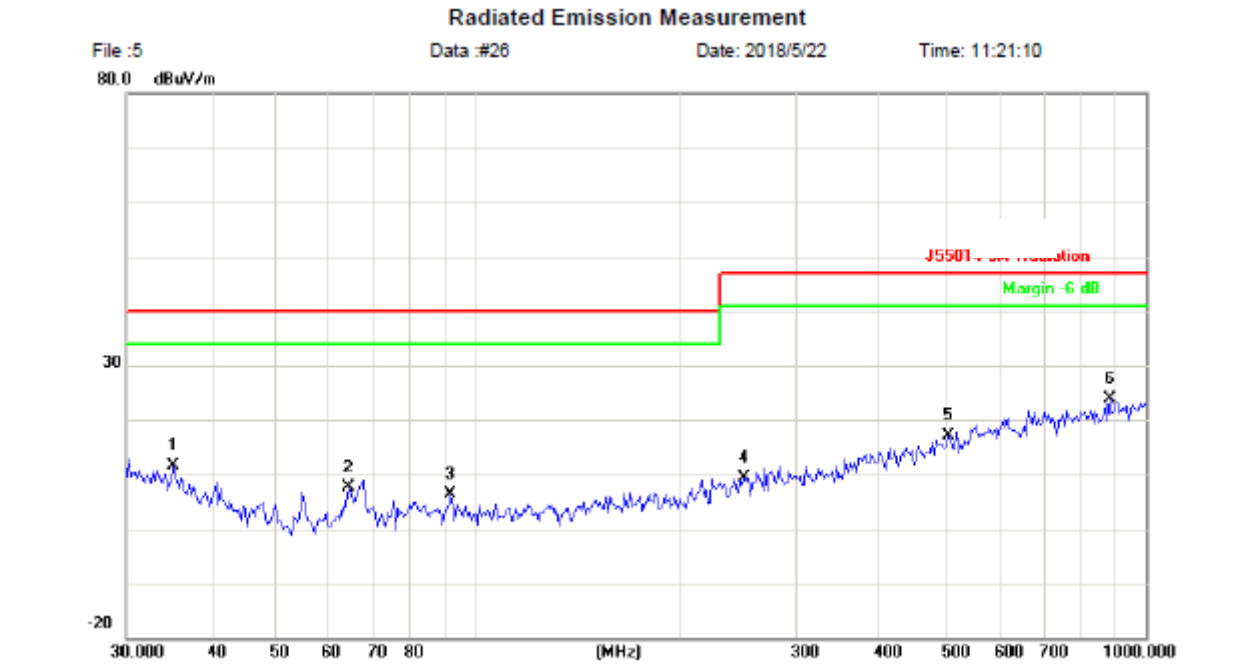
Radiation Emission Test Data			
Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Phase :	Horizontal
Test Voltage :	DC5V	Test Mode:	Data transmission



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dB/m	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1	35.2512	27.23	-16.87	10.36	40.00	-29.64	peak			
2	82.3588	27.62	-22.40	5.22	40.00	-34.78	peak			
3	160.3456	27.73	-20.86	6.87	40.00	-33.13	peak			
4	242.5253	29.30	-17.60	11.70	47.00	-35.30	peak			
5	550.9480	26.63	-9.11	17.52	47.00	-29.48	peak			
6 *	900.1474	28.56	-3.60	24.96	47.00	-22.04	peak			

*:Maximum data x:Over limit !:over margin

Radiation Emission Test Data			
Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Phase :	Vertical
Test Voltage :	DC5V	Test Mode:	Data transmission

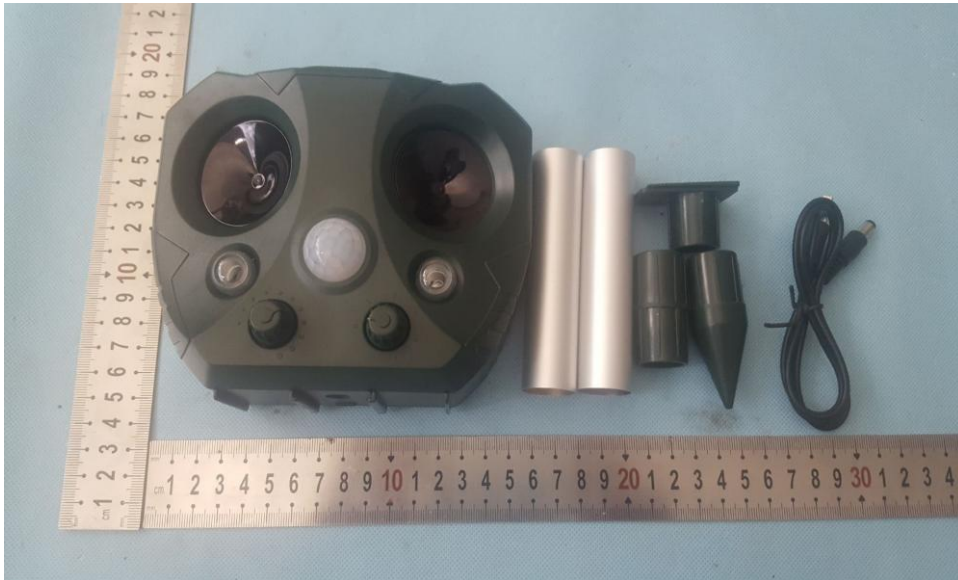


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		35.2512	28.49	-16.87	11.62	40.00	-28.38			peak
2		64.4331	31.70	-23.99	7.71	40.00	-32.29			peak
3		91.4949	28.37	-22.00	6.37	40.00	-33.63			peak
4		251.1804	26.61	-17.16	9.45	47.00	-37.55			peak
5		506.4791	27.60	-10.42	17.18	47.00	-29.82			peak
6	*	881.4067	28.21	-4.31	23.90	47.00	-23.10			peak

*:Maximum data x:Over limit !:over margin

ANNEX A:
Photo-documentation

EUT Photo 1



EUT Photo 2



EUT Photo 3



EUT Photo 4

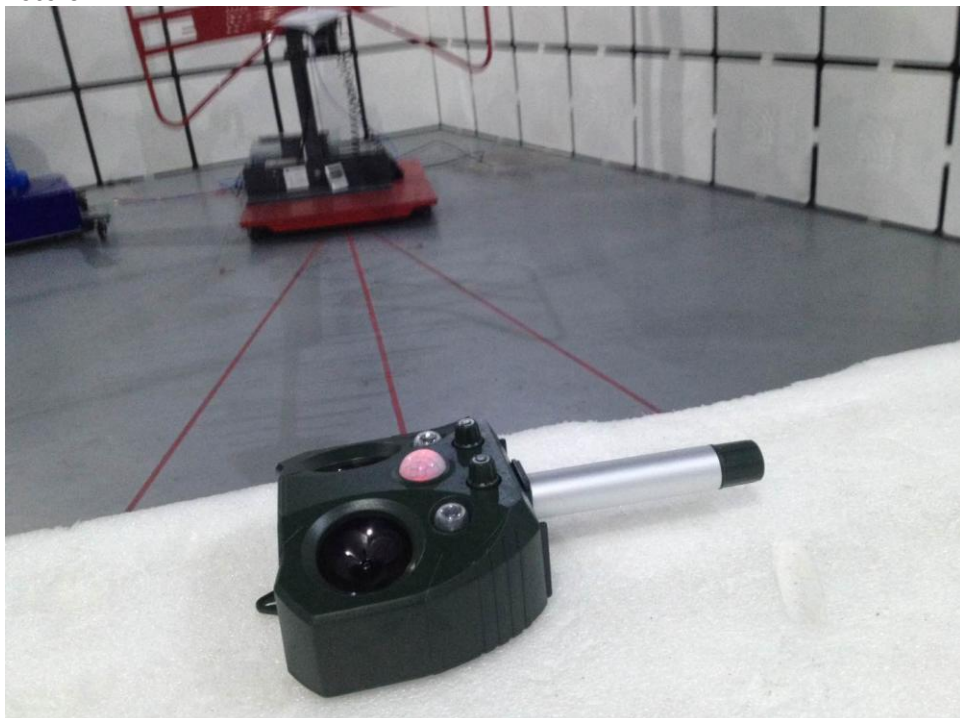


EUT Photo 5



EUT Photo 6



EUT Photo 7**EUT Photo 8**

******* END OF REPORT *******