



TEST REPORT

Application No.: SHEM1901010067TX
Applicant:
Address of Applicant:
Manufacturer:
Address of Manufacturer:
Factory:
Address of Factory:

Equipment Under Test (EUT):

EUT Name: Rocking Horse(Plush Toys, Hobby Horse)
Model No.: Refer to Page 2-3
Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.

Standard(s) : EN 55014-1:2017
EN 55014-2:2015

Date of Receipt: 2018-05-31
Date of Test: 2018-06-01 to 2018-06-08
Date of Issue: 2019-01-08

Table with 2 columns: Test Result, Pass\*

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

The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EU Declaration of Conformity and compliance with all relevant EU Directives.



The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.



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**Model No.:**

GS6091/

GS1010S/GS1010 SERIES

(GS1010/GS1011/GS1012/GS1013/GS1014/GS1015/GS1016/GS1017/GS1018/GS1019/GS1020/GS1021/GS1022/GS1023)/GS1024/GS1025/GS1026/GS1027/GS1028/GS1029/GS1030)

GS2020 SERIES

(GS2021/GS2022/GS2023/GS2024/GS2025/GS2026/GS2027/GS2028/GS2029/GS2030/GS2031/GS2032/GS2033/GS2034/GS2035/GS2036/GS2037/GS2038/GS2039/GS2040/GS2041/GS2042/GS2043/GS2045/GS2046/GS2047/GS2048/GS2049/GS2050/GS2051/GS2052/GS2053/GS2055/GS2056/GS2057/GS2058/GS2059/GS2060/GS2061/GS2062/GS2063/GS2064/GS2065/GS2066/GS2067/GS2068/GS2069/GS2070/GS2071/GS2072/GS2073/GS2074/GS2075/GS2076/GS2077/GS2078/GS2079/GS2080/GS2081/GS2082/GS2083/GS2084/GS2085/GS2086/GS2087/GS2088/GS2089/GS2090/GS2091/GS2092/GS2093/GS2094/GS2095/GS2096)

GS1010SW/GS1010WSERIES

(GS1010W/GS1011W/GS1012W/GS1013W/GS1014W/GS1015W/GS1016W/GS1017W/GS1018W/GS1019W/GS1020W/GS1021W/GS1022W/GS1023W/GS1024W/GS1025W/GS1026W/GS1027W/GS1028W/GS1029W/GS1030W)

GS2020W SERIES

(GS2021W/GS2022W/GS2023W/GS2024W/GS2025W/GS2026W/GS2027W/GS2028W/GS2029W/GS2030W/GS2031W/GS2032W/GS2033W/GS2034W/GS2035W/GS2036W/GS2037W/GS2038W/GS2039W/GS2040W/GS2041W/GS2042W/GS2043W/GS2045W/GS2046W/GS2047W/GS2048W/GS2049W/GS2050W/GS2051W/GS2052W/GS2053W/GS2055W/GS2056W/GS2057W/GS2058W/GS2059W/GS2060W/GS2061W/GS2062W/GS2063W/GS2064W/GS2065W/GS2066W/GS2067W/GS2068W/GS2069W/GS2070W/GS2071W/GS2072W/GS2073W/GS2074W/GS2075W/GS2076W/GS2077W/GS2078W/GS2079W/GS2080W/GS2081W/GS2082W/GS2083W/GS2084W/GS2085W/GS2086W/GS2087W/GS2088W/GS2089W/GS2090W/GS2091W/GS2092W/GS2093W/GS2094W/GS2095W/GS2096W)

GS3030 SERIES

(GS3031/GS3032/GS3033/GS3034/GS3035/GS3036/GS3037/GS3038/GS3039/GS3040/GS3041/GS3042/GS3043/GS3044/GS3045/GS3046/GS3047/GS3048)

GS3030W SERIES

(GS3031W/GS3032W/GS3033W/GS3034W/GS3035W/GS3036W/GS3037W/GS3038W/GS3039W/GS3040W/GS3041W/GS3042W/GS3043W/GS3044W/GS3045W/GS3046W/GS3047W/GS3048W)

GS4040 SERIES

(GS4041/GS4042/GS4043/GS4044/GS4045/GS4046/GS4047/GS4048/GS4049/GS4050/GS4051/GS4052/GS4053/GS4054/GS4055/GS4034/GS4033/GS4032/GS4031/GS4030)

GS4040W SERIES

(GS4041W/GS4042W/GS4043W/GS4044W/GS4045W/GS4046W/GS4047W/GS4048W/GS4049W/GS4050W/GS4051W/GS4052W/GS4053W/GS4054W/GS4055W/GS4034W/GS4033W/GS4032W/GS4031W/GS4030W)

GS8080 SERIES

(GS8081/GS8082/GS8083/GS8084/GS8085/GS8086/GS8087/GS8088/GS8089/GS8090/GS8091/GS8092/GS8093/GS8094/GS8095/GS8096/GS8097/GS8098/GS8099/GS8100/GS8101/GS8102/GS8103/GS8104/GS8105/GS8106/GS8107/GS8108/GS8109/GS8110)GS011/GS012/GS013/GS014/GS015/GS016/GS017/GS018/GS019/GS12209/GS1229/GS1226/GS11691

GS7070 SERIES

(GS7071/GS7072/GS7073/GS7074/GS7075/GS7076/GS7077/GS7078/GS7079/GS7080/GS7081/GS7082/GS7083/GS7084/GS7085/GS7086/GS7087/GS7088/GS7089/GS7090/GS7091/GS7092/GS7093/GS7094/GS7095/GS7096/GS7097/GS7098/GS7099/GS7100/GS7101/GS7102/GS7103/GS7104/GS7105/GS7106/GS7107/GS7108/GS7109/GS7110/GS7111/GS7112/GS7113/GS8085)

GS6060 SERIES

(GS6061/GS6062/GS6063/GS6064/GS6065/GS6066/GS6067/GS6068/GS6069/GS6070/GS6071/GS6072/GS6073/GS6074/GS6075/GS6076/GS6077/GS6078/GS6079/GS6080/GS6081/GS6082/GS6083/GS6084/GS6085/GS6086/GS6087/GS6088/GS6089/GS6090/GS6092/GS6093/GS6094/GS6095/GS6096/GS6097/GS6098/GS6099/GS6100/GS6101/GS6102/GS6103/GS6104/GS6105/GS6106/GS6107/GS6108/GS6109/GS6110/GS6111/GS6112/GS6113/GS6114/GS6115/GS6116/GS6117/GS6118/GS6119)



GS6060W SERIES


(GS6061W/GS6062W/GS6063W/GS6064W/GS6065W/GS6066W/GS6067W/GS6068W/GS6069W/GS6070W/GS6071W/GS6072W/GS6073W/GS6074W/GS6075W/GS6076W/GS6077W/GS6078W/GS6079W/GS6080W/GS6081W/GS6082W/GS6083W/GS6084W/GS6085W/GS6086W/GS6087W/GS6088W/GS6089W/GS6090W/GS6091W/GS6092W/GS6093W/GS6094W/GS6095W/GS6096W/GS6097W/GS6098W/GS6099W/GS6100W/GS6101W/GS6102W/GS6103W/GS6104W/GS6105W/GS6106W/GS6107W/GS6108W/GS6109W/GS6110W/GS6111W/GS6112W/GS6113W/GS6114W/GS6115W/GS6116W/GS6117W/GS6118W/GS6119W)

GS5050 SERIES

(GS5051/GS5052/GS5053/GS5054/GS5055/GS5056/GS5057/GS5058/GS5059/GS5060/GS5061/GS5062/GS5063/GS5064/GS5065/GS5066/GS5067/GS5068/GS5069/GS5070/GS5071/GS5072/GS5073/GS5074/GS5075/GS5076/GS5077/GS5078/GS5079/GS5080)



Revision Record			
Version	Description	Date	Remark
00	Add photos	2019-01-08	Based on SHEM180500423001

<b>Authorized for issue by:</b>			
			
		<hr/>	
		<b>Leo Xu / Project Engineer</b>	
			
		<hr/>	
		<b>Bruce Tang / Reviewer</b>	

## 2 Test Summary

Emission Part				
Item	Standard	Method	Requirement	Result
Radiated Emissions (30MHz-1GHz)	EN 55014-1:2017	CISPR 16-2-3	N/A	Pass
Immunity Part				
Item	Standard	Method	Requirement	Result
Electrostatic Discharge	EN 55014-2:2015	EN 61000-4-2:2009	4kV Contact Discharge 8kV Air Discharge	Pass
Radiated Immunity (80MHz-1GHz)	EN 55014-2:2015	EN 61000-4-3:2006 +A1:2008+A2:2010	3V/m, 80%, 1kHz Amp. Mod.	Pass

N/A: Not applicable

**Note1: Declaration of EUT Family Grouping:**

There are series models mentioned in this report and they are the similar in electrical and electronic characters. Only the model GS6091 was tested since their differences are model number and color and appearance.

**Note2:** The report is copied from SHEM180500423001 to add photos.

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## 4 General Information

### 4.1 Details of E.U.T.

Power supply: DC4.5V

### 4.2 Description of Support Units

The EUT has been tested as an independent unit.

### 4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Conducted Emission at mains port using AMN	±3.2dB (9kHz to 150kHz)
		±3.0dB (150kHz to 30MHz)
2	Conducted Emission at mains port using VP	±1.9 dB(9kHz to 30MHz)
3	Conducted Emission at telecommunication port using AAN	±2.4 dB(150kHz to 30MHz)
4	Radiated Power	±3.5dB
5	Radiated emission	±4.4dB (30MHz-1GHz )
		±4.6dB (1GHz-6GHz )

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

#### 4.4 Test Location

All tests were performed at:

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

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

No tests were sub-contracted.

#### 4.5 Test Facility

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

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **NVLAP (Certificate No. 201034-0)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). Certificate No. 201034-0.

- **FCC –Designation Number: CN5033**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.

Designation Number: CN5033. Test Firm Registration Number: 479755.

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-13868, C-14336, T-12221, G-10830 respectively.

#### 4.6 Deviation from Standards

None

#### 4.7 Abnormalities from Standard Conditions

None

#### 4.8 Monitoring of EUT for All Immunity Test

Visual: working status



## 5 Equipment List

<b>Radiated Emissions (30MHz-1GHz)</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No</b>	<b>Inventory No</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
EMI test receiver	Rohde & Schwarz	ESU40	SHEM051-1	2017-09-26	2018-09-25
CONTROLLER	INNCO	CO200	SHEM047-1	N/A	N/A
ANTENNA MAST	INNCO	MA400-EP	SHEM047-2	N/A	N/A
TURN DEVICE	INNCO	DE 3600-RH	SHEM047-3	N/A	N/A
Broadband UHF-VHF ANTENNA	SCHWARZBECK	VULB9168	SHEM048-1	2017-02-28	2020-02-27
Semi/Fully Anechoic	ST	11*6*6M	SHEM078-2	2017-07-22	2020-07-21
Low Amplifier	CLAVIIO	BDLNA-0001-412010	SHEM164-1	2017-08-22	2018-08-21

<b>Electrostatic Discharge</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No</b>	<b>Inventory No</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
Electrostatic Discharge Simulator	TESEQ	NSG 437	SHEM041-1	2017-09-26	2018-09-25

<b>Radiated Immunity (80MHz-1GHz)</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No</b>	<b>Inventory No</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
Signal generator	Rohde & Schwarz	SMJ100A	SHEM141-1	2017-09-26	2018-09-25
Power Meter	Rohde & Schwarz	NRP	SHEM057-1	2017-12-20	2018-12-19
Power meter sensor	Rohde & Schwarz	NRP-Z91	SHEM057-2	2017-12-20	2018-12-19
Antenna	SCHWARZBECK	STLP9128D	SHEM130-1	N/A	N/A
Amplifier	MILMEGA	AS0840-55-55	SHEM133-1	N/A	N/A
Power meter sensor	Rohde & Schwarz	NRP-Z22	SHEM136-1	2017-12-19	2018-12-18
ElectroMagnetic Field Probe	ETS-Lindgren	HI-6113	SHEM134-1	2017-12-19	2018-12-18
Semi/Fully Anechoic	ST	11*6*6M	SHEM078-2	2017-07-22	2020-07-21

<b>General used equipment</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No</b>	<b>Inventory No</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
Digital pressure meter	YONGZHI	DYM3-01	SHEM082-1	2018-01-25	2019-01-24
Temperature&humidity recorder	ShangHai weather meter work	ZJ 1-2B	SHEM042-1~6	2017-09-13	2018-09-12
Digital Multimeter	FLUKE	17B	SHEM043-3	2017-09-11	2018-09-10
Autoformer regulator	Guangzhou bao de	TDGC2-5KVA	SHEM150-1	N/A	N/A
Multi-purpose tong tester	FLUKE	316	SHEM001-1	2017-12-20	2018-12-19

## 6 Emission Test Results

### 6.1 Radiated Emissions (30MHz-1GHz)

Test Requirement:	EN 55014-1:2017
Test Method:	CISPR 16-2-3
Frequency Range:	30MHz to 1GHz
Measurement Distance:	3m
Limit:	
30MHz-230MHz	40 dB( $\mu$ V/m) quasi-peak
230MHz-1GHz	47 dB( $\mu$ V/m) quasi-peak
Detector:	Peak for pre-scan (120kHz resolution bandwidth) 30M to 1000MHz

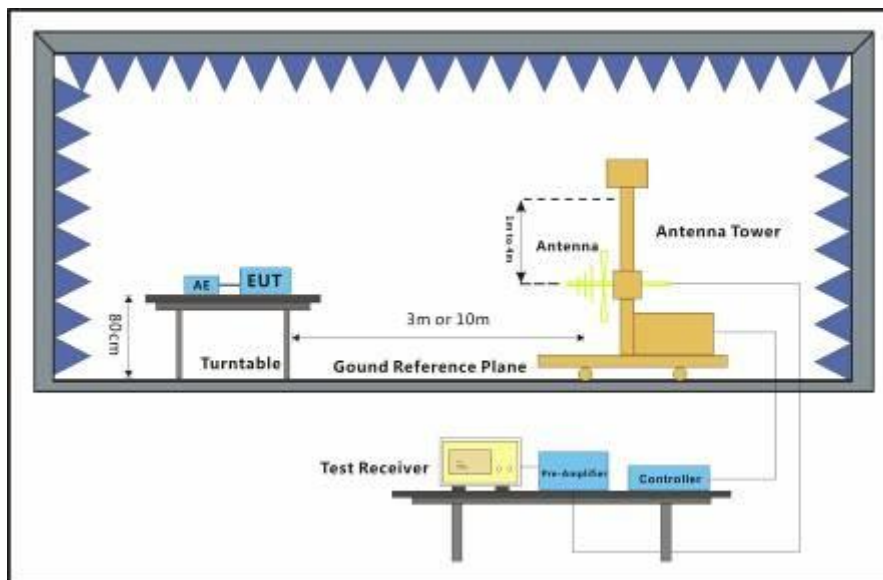
#### 6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 22 °C      Humidity: 51 % RH      Atmospheric Pressure: 1020 mbar

Test mode      a:Keep EUT running.

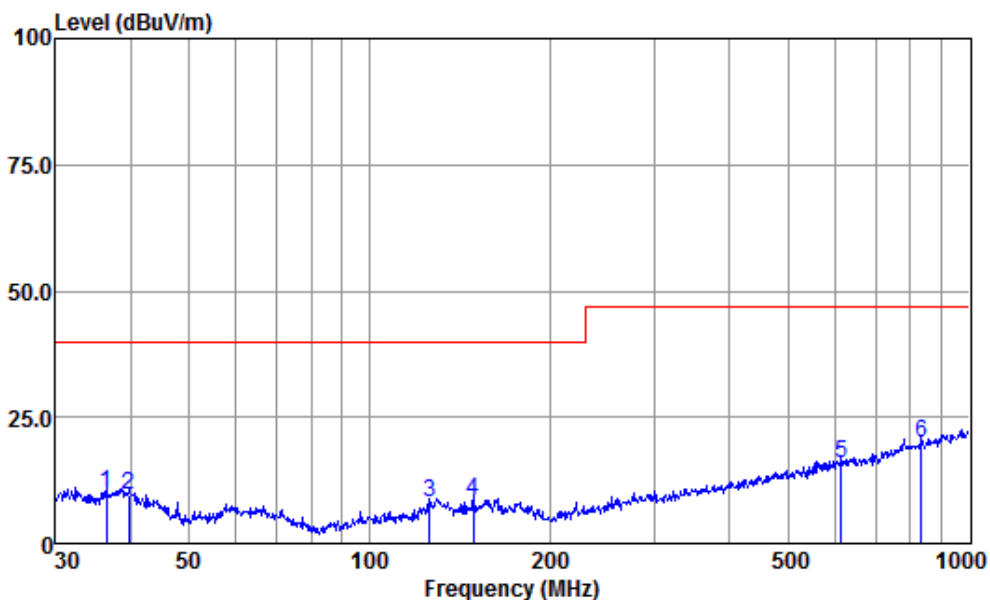
#### 6.1.2 Test Setup Diagram



#### 6.1.3 Measurement Data

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

Mode:a; Polarization:Horizontal

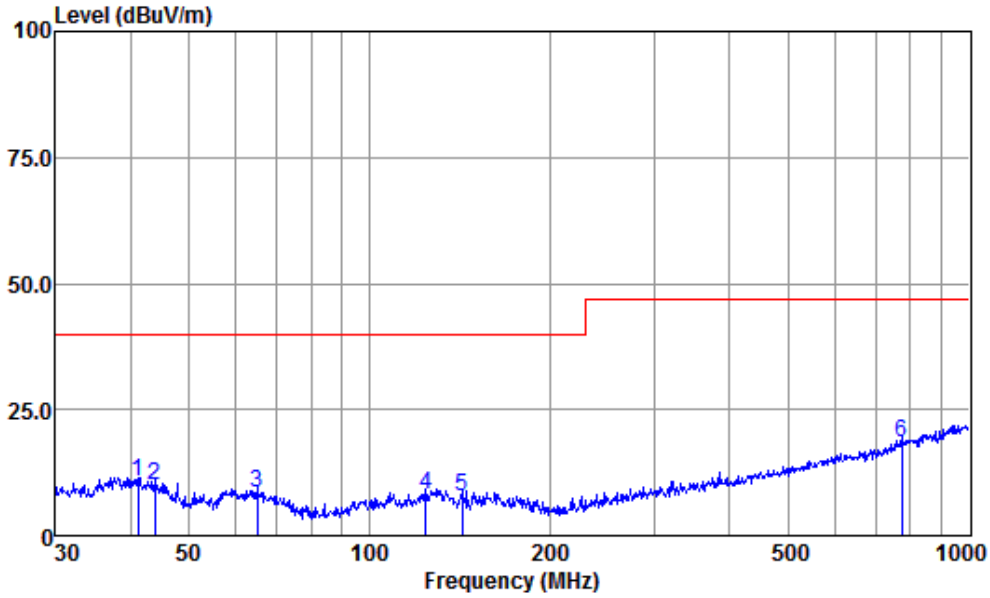


Antenna Polarity :HORIZONTAL  
 EUT/Project :4230TX  
 Test mode :a

	Read	Antenna	Cable	Preamp	Emission	Limit	Over	
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
-----	-----	-----	-----	-----	-----	-----	-----	-----
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	36.51	36.38	15.98	0.21	42.62	9.95	40.00	-30.05 QP
2	39.71	35.66	16.28	0.22	42.62	9.54	40.00	-30.46 QP
3	126.33	38.24	11.83	0.56	42.66	7.97	40.00	-32.03 QP
4	149.49	38.62	11.87	0.62	42.61	8.50	40.00	-31.50 QP
5	614.21	37.08	19.53	1.40	42.19	15.82	47.00	-31.18 QP
6	833.32	37.82	22.18	2.15	42.30	19.85	47.00	-27.15 QP

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical



Antenna Polarity :VERTICAL  
 EUT/Project :4230TX  
 Test mode :a

	Read	Antenna	Cable	Preamp	Emission	Limit	Over	
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	41.13	37.33	15.59	0.23	42.62	10.53	40.00	-29.47 QP
2	43.97	38.58	13.90	0.23	42.63	10.08	40.00	-29.92 QP
3	65.11	39.01	11.97	0.32	42.66	8.64	40.00	-31.36 QP
4	124.57	38.93	11.34	0.55	42.67	8.15	40.00	-31.85 QP
5	142.82	38.31	11.48	0.61	42.63	7.77	40.00	-32.23 QP
6	774.16	37.63	21.50	1.95	42.55	18.53	47.00	-28.47 QP

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

## 7 Immunity Test Results

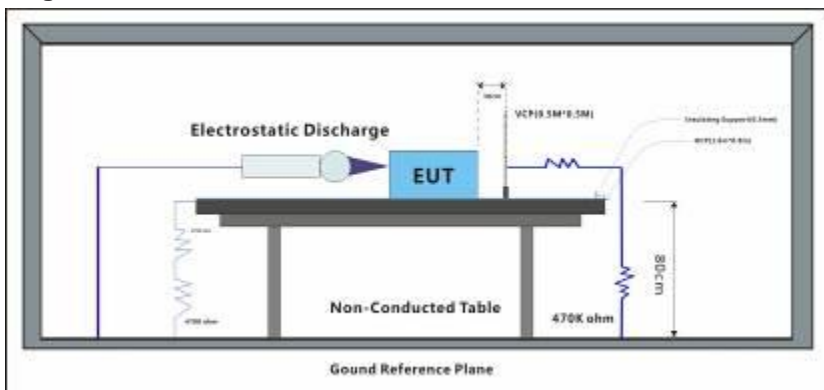
### 7.1 Performance Criteria Description in EN 55014-2:2015

- Criterion 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 intended. 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.
- Criterion 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.
- Criterion 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.

## 7.2 Electrostatic Discharge

Test Requirement: EN 55014-2:2015  
 Test Method: EN 61000-4-2:2009  
 Performance Criterion: B  
 Discharge Impedance: 330Ω/150pF  
 Number of Discharge: Minimum 10 times at each test point  
 Discharge Mode: Single Discharge  
 Discharge Period: 1 second minimum

### 7.2.1 Test Setup Diagram



### 7.2.2 E.U.T. Operation

Operating Environment:  
 Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1020 mbar  
 Test mode: a:Keep EUT running.

### 7.2.3 Test Results:

Observations: Test Point:  
 1. All insulated enclosure and seams.  
 2. All accessible metal parts of the enclosure.  
 3. All side

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

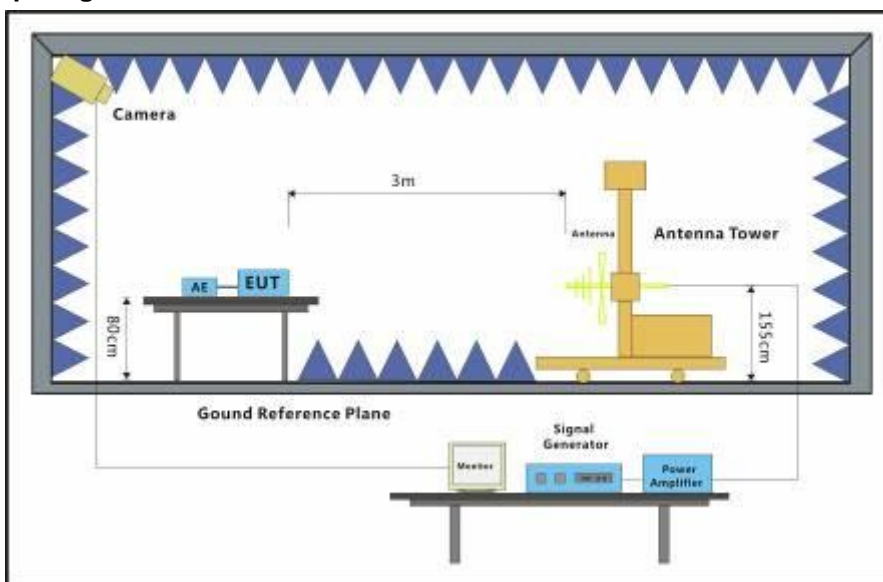
### Results:

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

### 7.3 Radiated Immunity (80MHz-1GHz)

Test Requirement: EN 55014-2:2015  
 Test Method: EN 61000-4-3:2006 +A1:2008+A2:2010  
 Performance Criterion: A  
 Frequency Range: 80MHz to 1GHz  
 Antenna Polarisation: Vertical and Horizontal  
 Modulation: 1kHz,80% Amp. Mod,1% increment

#### 7.3.1 Test Setup Diagram



#### 7.3.2 E.U.T. Operation

Operating Environment:

Temperature: 22 °C Humidity: 51 % RH Atmospheric Pressure: 1020 mbar

Test mode: a:Keep EUT running.

#### 7.3.3 Test Results:

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

#### Results:

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

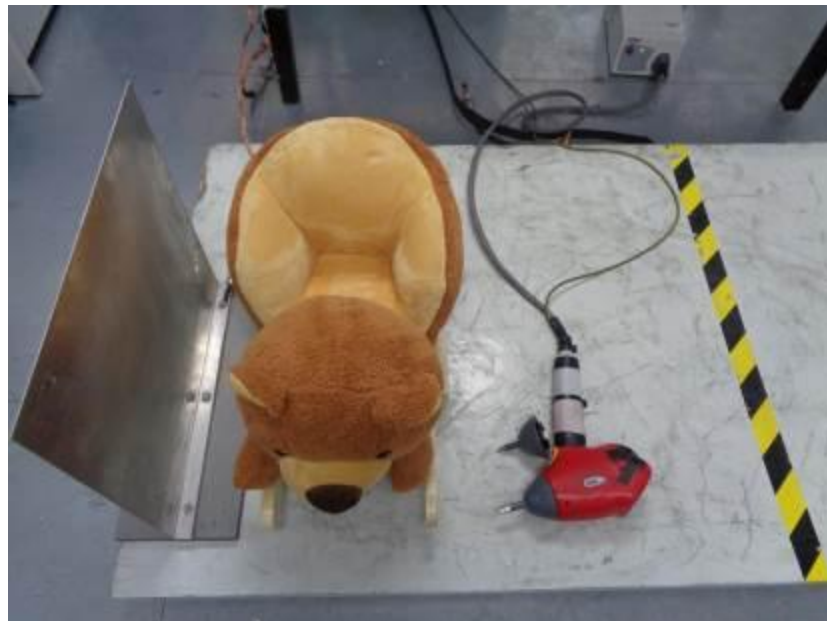


## 8 Photographs

### 8.1 Radiated Emissions (30MHz-1GHz) Test Setup



### 8.2 Electrostatic Discharge Test Setup





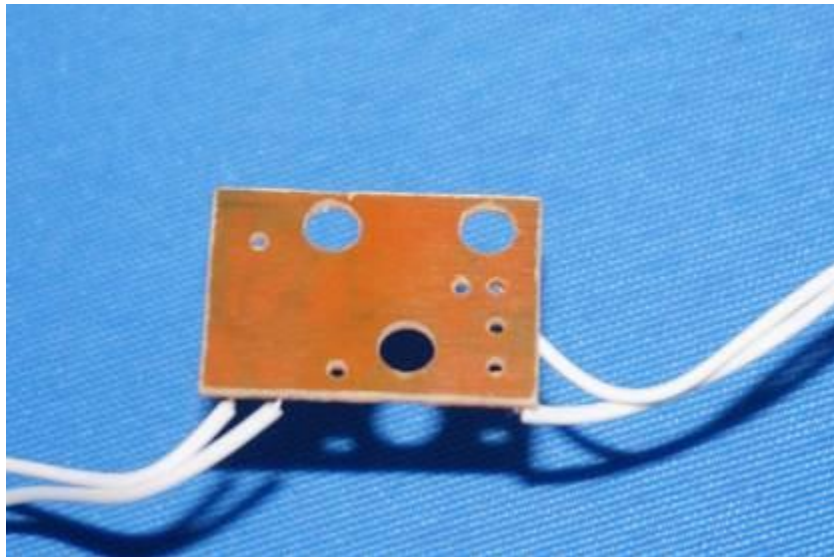
### 8.3 Radiated Immunity (80MHz-1GHz) Test Setup



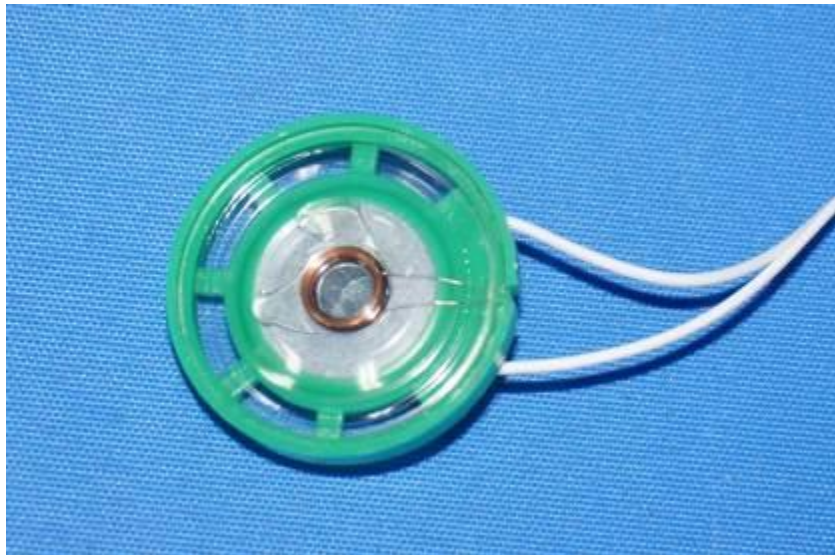
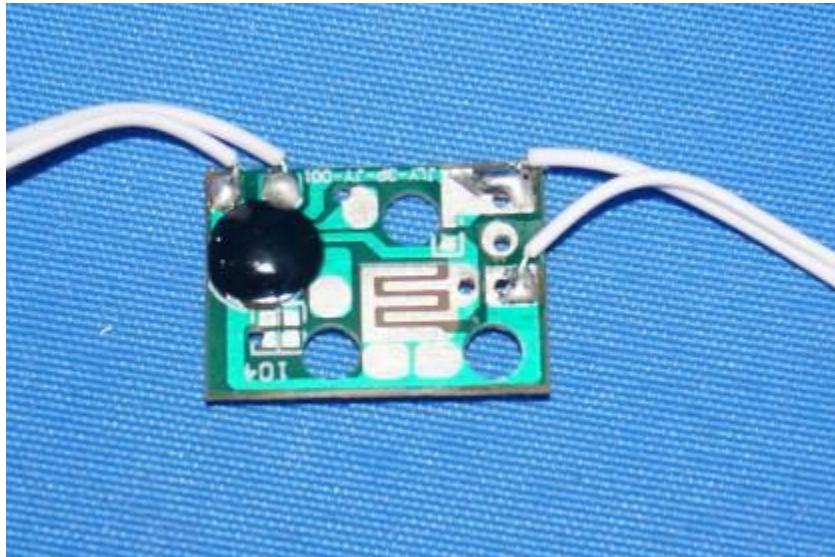
#### 8.4 EUT Constructional Details (EUT Photos)

























Add photos





















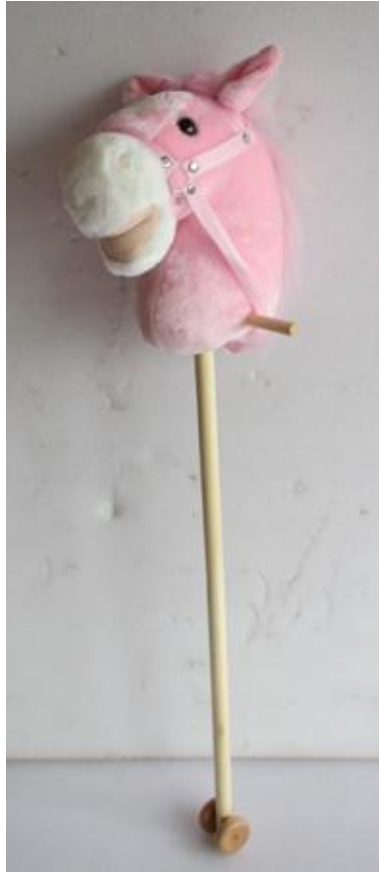




















- End of the Report -