

TEST REPORT No.: (5214)080-0448

TEST REPORT

To:	BLIP LLC	To:	-
Attn:	Ivan / Tommy So	Attn:	-
Address:	SUITE UG305, CHINACHEM GOLDEN PLAZA, 77 MODY ROAD, TST EAST, KLN, Hong Kong.	Address:	-
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E-mail:	--	E-mail:	-
Folder No.:	--		
Factory Name:	XING NING XING SHENG TOYS FACTORY		
Location:	--		
Product:	DPPP Magic Dance Pumpkin Model No.: 23399		
		Sample No:	(5214)080-0448
		Test date:	April 02, 2014
		Test Requested:	FCC Part 15 – 2012
		Test Method:	ANSI C63.4 – 2009
		FCC ID:	RTL23399
The results given in this report are related to the tested specimen of the described electrical apparatus.			
CONCLUSION: The submitted sample was found to <u>COMPLY</u> with requirement of FCC Part 15 Subpart C.			
Authorized Signature:			
			
Reviewed by: Keith Yeung		Approved by: Steven Tsang	
Date: April 29, 2014		Date: April 29, 2014	



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## Test Result Summary

EMISSION TEST			
Test requirement: FCC Part 15 - 2012			
Test Condition	Test Method	Test Result	
		Pass	Failed
Radiated Emission Test, 9kHz to 1GHz	ANSI C63.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Frequency range of Fundamental Emission	ANSI C63.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
26dB Bandwidth of Fundamental Emission	ANSI C63.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Duty Cycle Correction During 100mesc	ANSI C63.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Report Revision & Sample Re-submit History:

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## **Test Laboratory & Test Instruments List**

Radiated and Conducted emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2009. An Open Area Test Site and Full Anechoic Chamber (FCC Listed Site, Registration No. 642151) are set up for investigation and located at:

### **BUREAU VERITAS HONG KONG LIMITED, EMC CENTRE**

No. 2106-2107, 21/F., Westin Centre,  
26 Hung To Road,  
Kwun Tong, Kowloon,  
Hong Kong

## **Test Instrument List**

### **Radiated Emission**

EQUIPMENT	MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATION DUE
EMI TEST RECEIVER	R&S	ESCI	100379	20-JAN-2015
LOOP ANTENNA	ETS-LINDGREN	6502	00102266	20-OCT-2014
BILOG ANTENNA	SCHAFFNER	CBL6112D	25229	20-OCT-2014
OPEN AREA TEST SITE	BVCPS	N/A	N/A	11-SEP-2014
ANECHOIC CHAMBER	ALBATROSS	M-CDC	80374004499B	08-JUL-2014
COAXIAL CABLE	SUHNER	RG214	N/A	05-FEB-2015

## **Measurement Uncertainty**

MEASUREMENT	FREQUENCY	UNCERTAINTY
Radiated emissions	9kHz to 30MHz	4.2dB
	30MHz to 1GHz	5.0dB
	1GHz to 18GHz	4.9dB

### **Remarks: -**

N/A: Not Applicable or Not Available

The measurement instrumentation uncertainty would be taking into consideration on each of the test result



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## **Equipment Under Test [EUT]**

### **Description of Sample:**

Product: DPPP Magic Dance Pumpkin  
Model No.: 23399  
Additional Model name: --  
Additional Model number: 10836 / 10906 / 10942 / 10943 / 11142 / 11274 / 11342 /  
11345 / 11357 / 11382 / 11424 / 11503 / 11511 / 11549 /  
11645 / 11814 / 11906 / 21225 / 90051 / 10443 / 23557 /  
10885  
Additional Model Information: Declare the Circuit, PCB layout and Electrical parts and  
Outlook of the products are identical to the basic  
model. Except the packaging & the program.  
Power Supply: 3Vd.c. ("AAA" size battery x 2)

### **Description of EUT Operation:**

The Equipment Under Test (EUT) is a **BLIP LLC** of Radio Control toy. The transmitter is 8 buttons 1 switch transmitter and operating at 27.145MHz. The EUT continues to transmit buttons is being pressed, Modulation by IC, and type is frequency modulation.

The transmitter has different control:

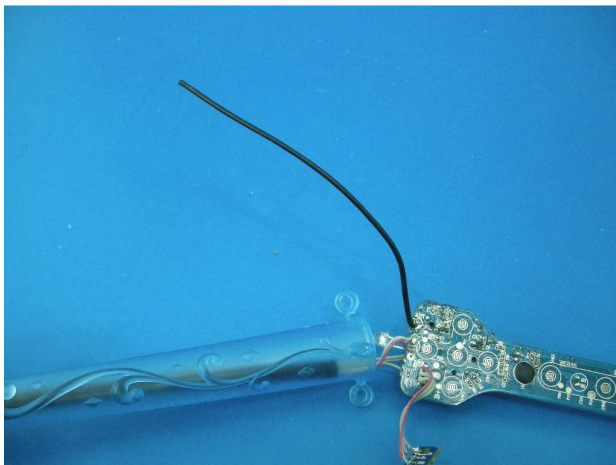
1. ON / OFF / TRY ME switch – Select ON / OFF / TRY ME
2. Tail Wag button – Speak and wag her tail
3. Curtsy button – Curtsy and speak
4. Dancing button – Speak and then dance to her favourite song
5. Forward button – Forward control
6. Backward button – Backward control
7. Left button – Left control
8. Right button – Right control
9. Centre button – Move forward and her tail will wag sweetly
10. Wave the wand – "Gliss" sound and say one of 9 phrases

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**Antenna Requirement (Section 15.203)**

The EUT is use of a permanently antenna. The antenna consists of 12cm long wire antenna. It is soldered on the PCB. The antenna is not replaceable or user serviceable. There are no deviations or exceptions to the specifications.

**Photo of Antenna**



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## Test Results

### Radiated Emissions (Fundamental)

Test Requirement: FCC Part 15 Section 15.227  
Test Method: ANSI C63.4  
Test Date(s): 2014-04-02  
Temperature: 22.0 °C  
Humidity: 85.0 %  
Atmospheric Pressure: 100.3 kPa  
Mode of Operation: Transmission mode / On mode  
Tested Voltage: 3Vd.c. ("AAA" size battery x 2)

### Test Method:

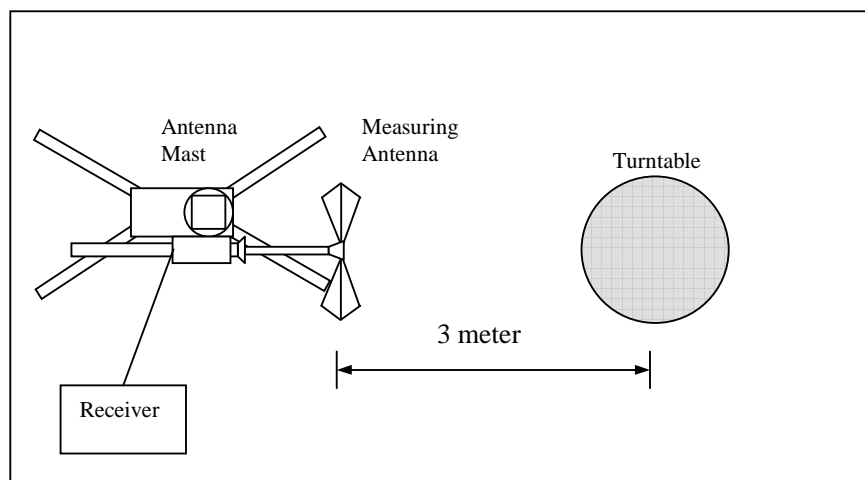
Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2009.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 1m and 0.8m high above the ground. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be performed using new battery. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

For below 30MHz, a loop antenna with its vertical plane is placed 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1m above the ground.

Location: The Roof, Westin Centre, 26 Hung To Road, Kwun Tong, Kowloon, Hong Kong

### Test Setup: Open Area Test Site





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### Limits for Field Strength of Fundamental Emissions [FCC 47CFR 15.227]:

Frequency Range of Fundamental [MHz]	Field Strength of Fundamental Emission [Peak] [μV/m]	Field Strength of Fundamental Emission [Average] [μV/m]
26.96 – 27.28	100,000 (100 dBμV/m)	10,000 (80 dBμV/m)

### Measurement Data

### Test Result of (Transmission mode): PASS

#### Detection mode: Peak

Frequency (MHz)	Polarity (H/V) and degree	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
27.145	V/0°	11.1	37.6	100	-62.4

#### Detection mode: # Average

Frequency (MHz)	Polarity (H/V) and degree	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
27.145	V/0°	11.1	**33.4	80	-46.6

# For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.

\*\*Duty Cycle Correction =  $20\log(0.614) = -4.2\text{dB}$

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 100KHz  
VBW = 300KHz





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### Radiated Emissions (9kHz – 1GHz)

Test Requirement: FCC Part 15 Section 15.209  
Test Method: ANSI C63.4  
Test Date(s): 2014-04-02  
Temperature: 22.0 °C  
Humidity: 85.0 %  
Atmospheric Pressure: 100.3 kPa  
Mode of Operation: Transmission mode / On mode  
Tested Voltage: 3Vd.c. ("AAA" size battery x 2)

#### Limits for Radiated Emissions [FCC 47 CFR 15.209]:

Frequency Range [MHz]	Quasi-Peak Limits [ $\mu\text{V/m}$ ]	Measurement Distance m
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above960	500	3





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### Measurement Data

**Test Result of (Transmission mode): PASS**

**Detection mode: Quasi-Peak**

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
54.290	H	8.2	24.2	40.0	-15.8
81.435	H	8.1	18.9	40.0	-21.1
108.580	H	13.2	23.7	43.5	-19.8
135.725	H	13.3	24.2	43.5	-19.3
162.870	H	11.0	22.8	43.5	-20.7
190.015	H	10.6	25.3	43.5	-18.2
217.160	H	10.5	27.8	46.0	-18.2
244.305	H	13.3	31.6	46.0	-14.4
271.450	H	14.2	30.8	46.0	-15.2
298.595	H	14.8	29.6	46.0	-16.4

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
54.290	V	8.2	24.6	40.0	-15.4
81.435	V	8.1	18.8	40.0	-21.2
108.580	V	13.2	23.6	43.5	-19.9
135.725	V	13.3	24.0	43.5	-19.5
162.870	V	11.0	22.6	43.5	-20.9
190.015	V	10.6	24.9	43.5	-18.6
217.160	V	10.5	27.3	46.0	-18.7
244.305	V	13.3	30.9	46.0	-15.1
271.450	V	14.2	29.9	46.0	-16.1
298.595	V	14.8	29.0	46.0	-17.0

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 120KHz  
VBW = 120KHz



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**Measurement Data**

**Test Result of (On mode): PASS**

**Detection mode: Quasi-Peak**

Frequency (MHz)	Polarity (H/V)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
Emissions detected are more than 20 dB below the limit line(s)				

**26dB Bandwidth of Fundamental Emission**

Test Requirement: FCC 47 CFR 15.227  
 Test Method: ANSI C63.4  
 Test Date(s): 2014-04-02  
 Temperature: 22.0 °C  
 Humidity: 85.0 %  
 Atmospheric Pressure: 100.3 kPa  
 Mode of Operation: Transmission mode  
 Tested Voltage: 3Vd.c. ("AAA" size battery x 2)

**Test Method:**

The bandwidth is measured at an amplitude level reduced from the reference level by a specified ratio. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

**Limits for 26dB Bandwidth of Fundamental Emission:**

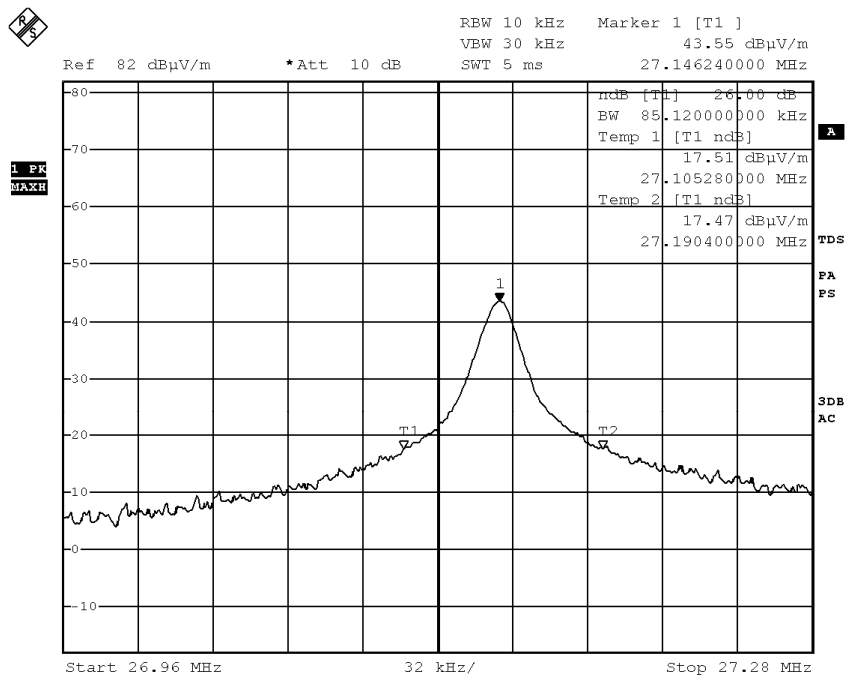
Frequency [MHz]	26dB Bandwidth [KHz]	Limits [MHz]
27.14624	102.40	within 26.96 – 27.28



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## Measurement Data

### Test Result of 26dB Bandwidth of Fundamental Emission: PASS



Date: 2.APR.2014 10:41:21



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### Duty Cycle Correction During 100msec:

Each function key sends a different series of characters, but each packet period (57.0msec) never exceeds a series of 11 long (1.8msec) and 19 short (0.8msec) pulses. Assuming any combination of short and long pulses maybe obtained due to encoding the worst case transmit duty cycle would be considered  $(11 \times 1.8\text{msec}) + (19 \times 0.8\text{msec})$  per 57msec = 61.4% duty cycle.

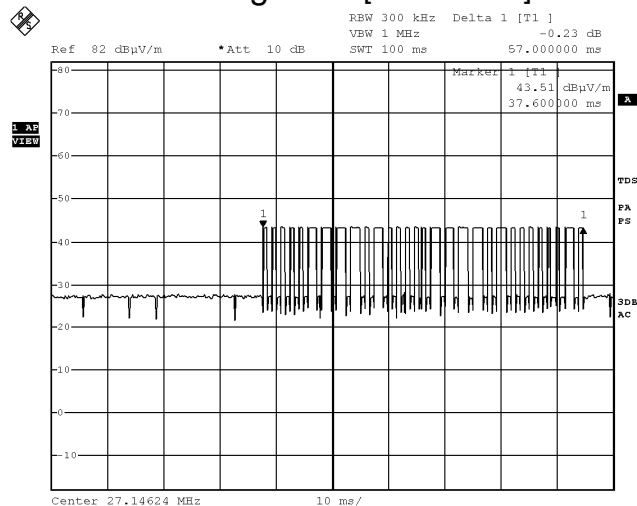
Remarks: -

Duty Cycle Correction =  $20\text{Log}(0.614) = -4.2\text{dB}$

The following figures [Figure A to Figure C] show the characteristics of the pulse train for one of these functions.

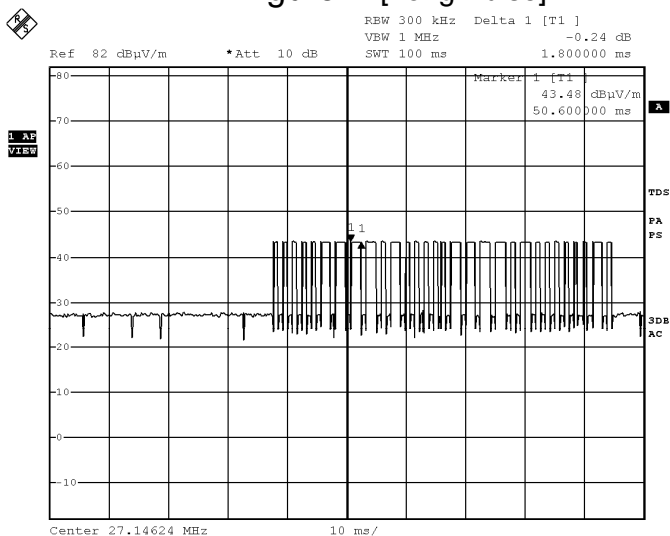
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### Figure A [Pulse Train]



Date: 2.APR.2014 10:42:21

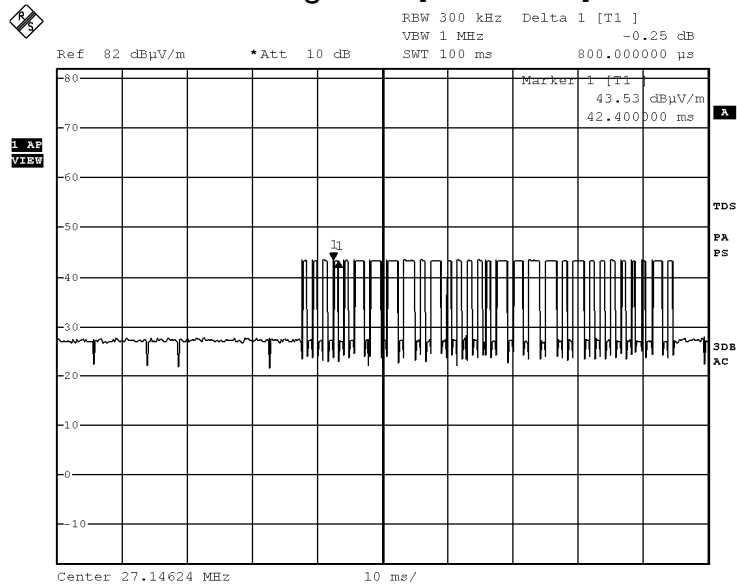
### Figure B [Long Pulse]



Date: 2.APR.2014 10:43:11

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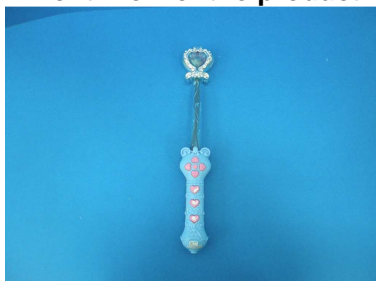
**Figure C [Short Pulse]**



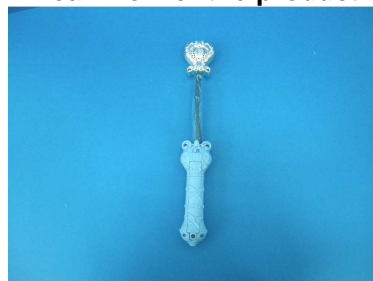
Date: 2.APR.2014 10:43:32

**TEST REPORT No.: (5213)331-1368**  
**Photographs of EUT**

**Front View of the product**



**Rear View of the product**



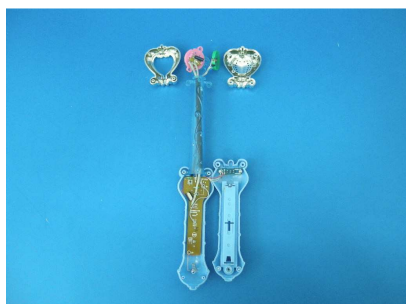
**Battery compartment**



**Battery Cover**



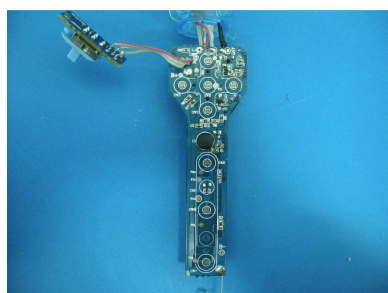
**Front View of the product (Internal)**



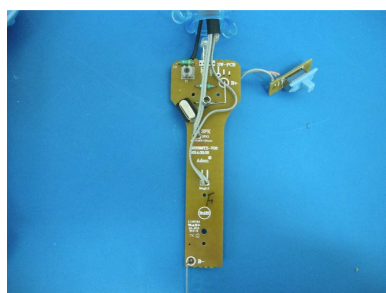
**Rear View of the product**



**Inner Circuit Top View**



**Inner Circuit Bottom View**





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**Measurement of Radiated Emission Test Set Up**



**\*\*\*\*\* End of Report \*\*\*\*\***