



EMC VERIFICATION SUMMARY

Report No.: SZHH01091797-001

Toy

ITE

Others

Model: BL-81701 Additional Models: BL-81522, BL-81500, BL-81719, BL-82622, BL-81600 Product Description: ARIA Sample Receipt Date: 25 January 2017	Applicant: DONGGUAN LIYANG TOYS LTD Floor 3, Building 2, Daxingwei Industry Xianxi, Wusha, Changan Town, Dongguan City, Guangdong Province		
<input type="checkbox"/> 1st TEST <input checked="" type="checkbox"/> 2nd TEST	Test Conducted Date: 25 January 2017 to 13 February 2017		
	ALL TESTS WERE CONDUCTED IN ACCORDANCE WITH: *EN 55014-1: 2006 + A1: 2009 + A2: 2011 *EN 55014-2: 1997 + A1: 2001 + A2: 2008		
Test Site and Location:	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch Room102/104, No 203, KeZhu Road, Science City, GETDD Guangzhou, China		
Test Result	OK	Not OK	Remark (See Page 2)
*EN 55014-1: 2006 + A1: 2009 + A2: 2011	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*EN 55014-2: 1997 + A1: 2001 + A2: 2008	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
When determining the test conclusion, the Measurement Uncertainty of test has been considered.			

Prepared and Checked By:

Approved By:

Sign On File

**Tom Li
Engineer
Intertek**

**Jimmy Wen
Assistant Supervisor
Intertek
Date: 13 February 2017**

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- The test report only allows to be revised only within the report defined retention period unless further standard or the requirement was noticed

EMC Results Conclusion (with Justification)

RE: EMC Testing Pursuant to EMC Directive 2014/30/EU Performed On the ARIA,
Model: BL-81701

We tested the ARIA, Model: BL-81701 to determine if it was in compliance with the relevant EN standards as marked on the EMC Verification Summary. We found that the unit met the requirement of EN 55014-1, EN55014-2 standards when tested after modification.

The Models: BL-81522, BL-81500, BL-81719, BL-82622, BL-81600 are the same as the Model: BL-81701 in hardware aspect. The difference in model number serves as marketing strategy.

The production units are required to conform to the initial sample as received when the units are placed on the market.

LABORATORY MEASUREMENTS

Configuration Information

Equipment Under Test (EUT):	ARIA
Model:	BL-81701
Serial No.:	Not Labelled
Support Equipment:	N/A
Cables & Others:	N/A
Adapter:	N/A
Rating Voltage:	DC 6.0V (4 x 1.5V AAA batteries)

Applicant: DONGGUAN LIYANG TOYS LTD
Model: BL-81701
Worst Case Operating Mode: Motor

EN 55014-1 Radiated Scan

Used Test Equipment

Equipment No.	Equipment	Manufacturer	Model No.	Cal. Date	Due Date
SZ185-01	EMI Receiver	R & S	ESCI	20-Jan-17	20-Jan-18
SZ061-12	Biconilog Antenna	ETS	3142E	09-Sep-16	09-Sep-17
SZ188-01	Anechoic Chamber	ETS	RFD-F/A-100	16-Apr-16	16-Apr-18

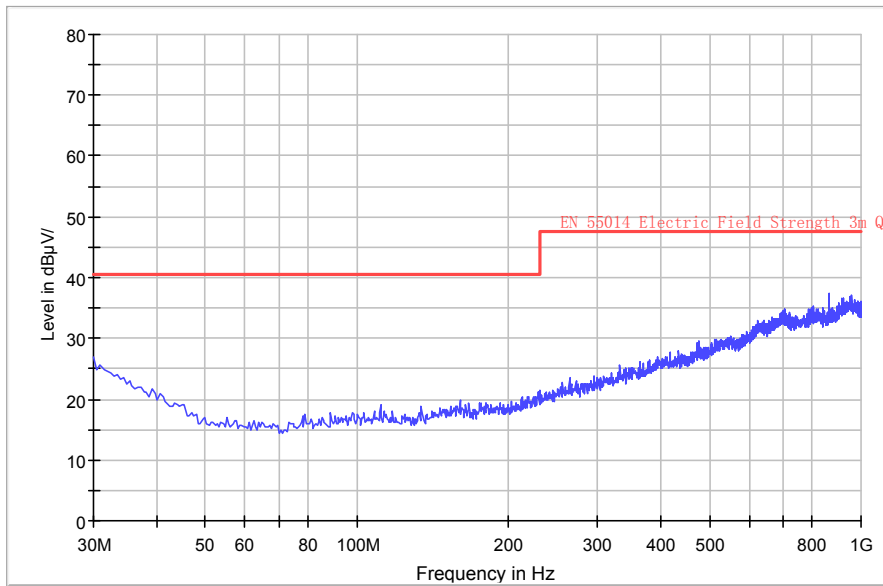
- Notes:
1. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
 2. Negative sign (-) in the margin column signify levels below the limit.
 3. Frequency range scanned: 30MHz to 1000MHz.
 4. Only emissions significantly above equipment noise floor are reported.
 5. Uncertainty: ± 4.8 dB at a level of confidence of 95%.

Applicant: DONGGUAN LIYANG TOYS LTD
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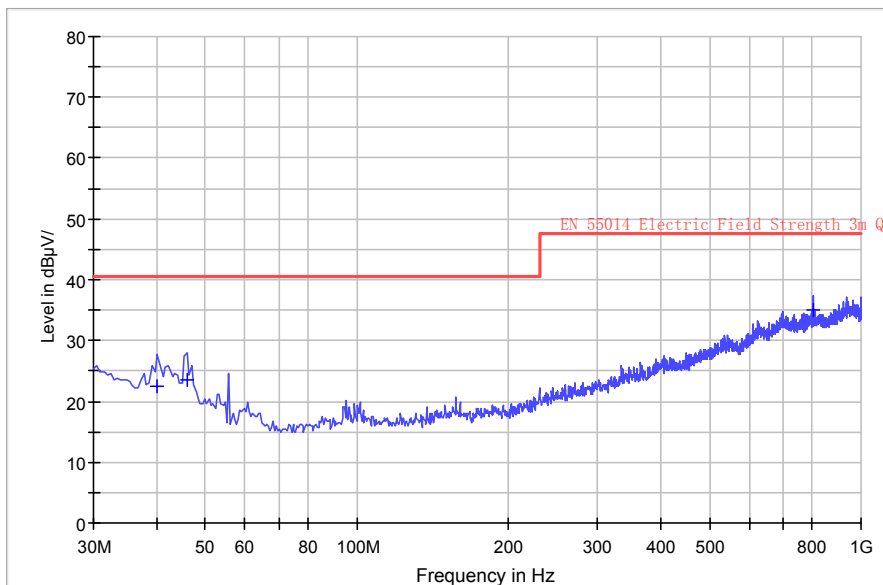
Graphic

Radiated Emissions Pursuant to EN55014-1: Emissions Requirement

Horizontal



Vertical



Applicant: DONGGUAN LIYANG TOYS LTD

Model: BL-81701

Worst Case Operating Mode: Motor

Data Table**Radiated Emissions
Pursuant to EN55014-1: Emissions Requirement**

Polarization	Frequency (MHz)	Net at 3m (dB μ V/m)	Calculated Net at 10m (dB μ V/m)	Limit at 10m (dB μ V/m)	Margin (dB)
V	40.185	22.6	12.1	30.0	-17.9
V	46.005	23.6	13.1	30.0	-16.9
V	803.090	35.1	24.6	37.0	-12.4

 No emissions significantly above equipment noise floor.

Applicant: DONGGUAN LIYANG TOYS LTD
 Model: BL-81701

**EN 61000-4-2
 Electrostatic Discharge**

Test Summary (Pursuant to EN55014-2)

Basic Standard:		IEC 61000-4-2: 1995 + A1: 1998 + A2: 2000
Port:		Enclosure
Required Performance Criterion:		C
Level:		±8.0 kV (Air Discharge) ±4.0 kV (Contact Discharge) ±4.0 kV (Indirect Contact Discharge)
Time Between Each Discharge:		1 second
Test Mode:		Motor
Temperature:		22.6°C
Humidity:		55.8%
Test Setup:		Table-Top
Test of Post-installation		N/A
Test Point:	Air Discharge:	All insulated enclosure and seams All the points where contact discharge cannot be applied
	Contact:	All metal parts of the EUT
	HCP:	All sides of the EUT
	VCP:	Four faces of the EUT

Used Test Equipment

Equipment No.	Equipment	Manufacturer	Model No.	Cal. Date	Due Date
SZ189-03	ESD Simulator	TESEQ	NSG 435	17-Nov-16	17-Nov-17

Applicant: DONGGUAN LIYANG TOYS LTD
Model: BL-81701

Test Results

EN 61000-4-2 Electrostatic Discharge

Discharge Type	No. of Discharge	Applied Voltage	Result (Pursuant to EN 55014-2, Criterion C)
Contact Discharge	20	+4kV	OK
		-4kV	OK
Air Discharge	20	+8kV	OK
		-8kV	OK
Indirect HCP Discharge	20	+4kV	OK
		-4kV	OK
Indirect VCP Discharge	20	+4kV	OK
		-4kV	OK

Additional Information

No observable change

Applicant: DONGGUAN LIYANG TOYS LTD

TRF No.: EN55014-1/2_b

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Model: BL-81701

External Photo



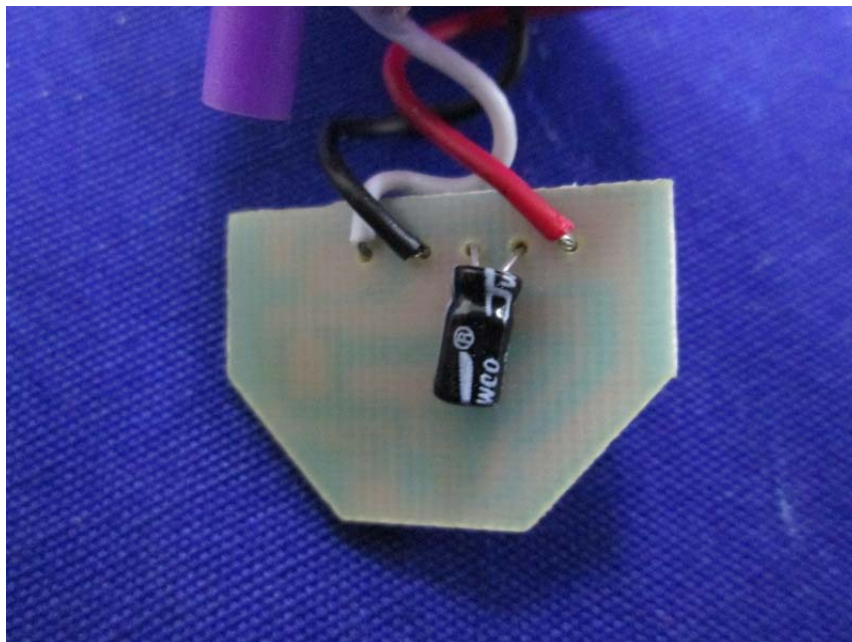
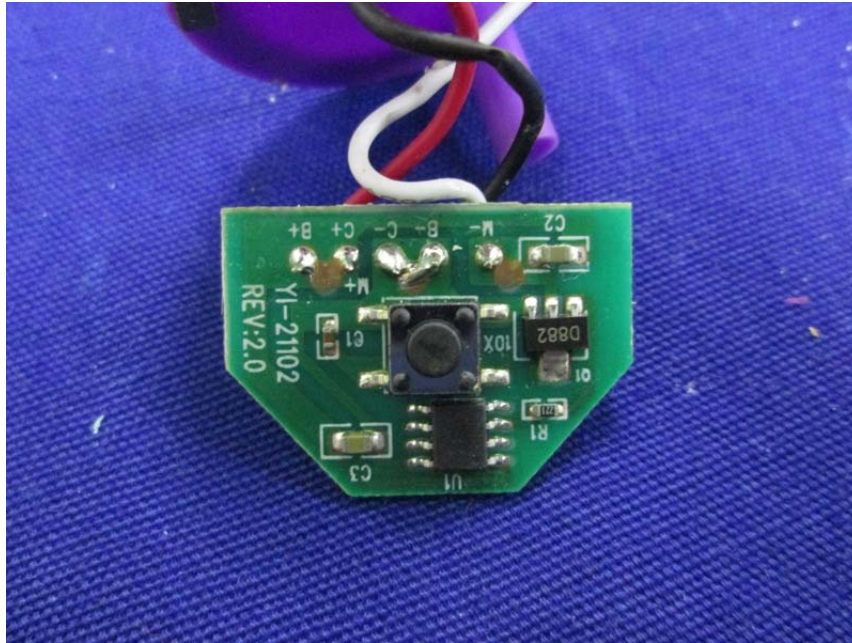
Applicant: DONGGUAN LIYANG TOYS LTD
Model: BL-81701

Internal Photo



Applicant: DONGGUAN LIYANG TOYS LTD
Model: BL-81701

Internal Photo



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