



CONSUMER PRODUCTS SERVICES DIVISION

LEXIBOOK LIMITED

Technical Report: (5222)102-1199 (B)
Date Received: April 15, 2022

April 29, 2022
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JOHN CHONG
LEXIBOOK LIMITED
UNIT 8-9, 4TH FLOOR KENNING INDUSTRIAL
BUILDING
19 WANG HOI ROAD
KOWLOON BAY
KOWLOON
HONG KONG

Sample Description:	ALARM CLOCK 1.) UNICORN 2.) HARRY POTTER	Sample Size:	4
Vendor:	N/A	Style No(s):	(RL800) RL800UNI, (RL800) RL800HP
Manufacturer:	N/A	SKN/SKU No.:	N/A
Buyer:	N/A	PO No.:	N/A
Labeled Age Grade:	NOT PRESENT	Ref #:	N/A
Appropriate Age Grade:	CHILDREN PRODUCTS, OVER 8 YEARS OF AGE	Country of Origin:	CHINA
Client Specified Age Grade:	NOT SPECIFIED	Assortment No.:	(RL800UNI/ RL800HP)
Tested Age Grade:	CHILDREN PRODUCTS, OVER 8 YEARS OF AGE	Terminal voltage:	4.5V
UPC Code:	841874022985, 3380743092195		

EXECUTIVE SUMMARY:

The sample COMPLIES with the tested requirements of the applicable EC harmonized standards EN 55014-1 and EN 55014-2 pertaining to Directive 2014/30/EU Electromagnetic Compatibility.

BUREAU VERITAS HONG KONG LIMITED

Cheung Wai Yung
Manager
Electrical Department

CWY/cc



STANDARDS

EMISSION STANDARD APPLIED		
	Standard	Overall Result
	EN 55014-1: 2017+A11:2020 Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 1: Emission	Meet
Emission Tests Required		
Test	Test method	Result
Measurement of Radiated Disturbances (30 MHz – 1000 MHz)	CISPR 16-2-3: 2010 + A1: 2010 + A2: 2014	Meet

IMMUNITY STANDARD APPLIED		
	Standard	Overall Result
	EN 55014-2: 2015 Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 2: Immunity	Meet
Immunity Tests Required		
Test	Test method	Result
Electrostatic Discharge (ESD)	IEC 61000-4-2: 2008	Meet



Test Laboratory

Hong Kong Productivity Council – Electromagnetic Compatibility Centre

Address:

LG1/F., HKPC Building, 78 Tat Chee Avenue, Kowloon, Hong Kong

BUREAU VERITAS HONG KONG LIMITED, EMC CENTRE

Address:

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

A) Emission Measurements:

Classification of electrical and electronic toys and the consequently applicable emission tests in accordance to the standard EN 55014-1:

Per sub-clause A.7.1 of EN55014-1, the captioned EUT falls within the scope of the following category:

Category B:

Definition: Battery toys with built-in batteries, without possibility for external electric connection

Tests required: - Radiated disturbances



Test Results:

Measurement of Radiated Electromagnetic Disturbances (30 MHz – 1 GHz):

Standard: EN 55014-1
Limit: Table 9
Port under test: Enclosure
Operational mode under test: Clock mode (with sound, light, display, alarm)

The operational mode under test is determined according to the typical use of the EUT with respect to the expected highest level of emission. During the test, various parts of the EUT system are exercised in a manner permitting detection of all system disturbances.

Test Location: Hong Kong Productivity Council – Electromagnetic Compatibility Centre

LG1/F., HKPC Building, 78 Tat Chee Avenue, Kowloon, Hong Kong

Test equipment:

Description	Brand Name	Model No.
EMI TEST RECEIVER	R&S	ESU26
MULTI-FUNCTIONAL ANECHOIC CHAMBER	ALBATROSS	--
BICONICAL ANTENNA	R&S	HK116
LOG-PERIODIC ANTENNA	R&S	HL223
ACTIVE LOOP ANTENNA	EMCO	6502

Remarks:

Measurement uncertainty is calculated in accordance with CISPR 16-4-2.
The statement of compliance is based on a 95% coverage probability for the expanded uncertainty of the measurement result using a coverage factor $k = 2$.
Compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
 U_{lab} is less than U_{cispr} , compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit; non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.



Test method:

The test is performed in accordance with CISPR 16-2-3 as a basic standard at a measurement range of 3 meters.

The test site has, by verification measurements, satisfied the normalized site attenuation (NSA) requirements specified in the standard CISPR 16-1-4. For each test frequency during final test, the antenna-to-EUT azimuth is varied through 360°. The antenna is also scanned between 1m to 4m in height above the ground plane to maximize the level of radiated disturbances. The final test results are measured with quasi-peak detector of the EMI test receiver.

If the measurement results are 20 dB lower than the corresponding limit levels, no records of these measurement results are required.

Results:

The maximum disturbance levels measured with quasi-peak or peak detector of EMI test receiver are found at least 20dB below the limit level of the standard applied. No records of measurement results are required.

**Remarks: Calculated measurement uncertainty: 5.3dB (30MHz to 200MHz)
6.1dB (200MHz to 1GHz)**

Immunity Tests:

Classification of electrical and electronic toys and the consequently applicable immunity tests in accordance to the standard EN 55014-2:

Per clause 4 of EN55014-2, the captioned EUT falls within the scope of the following category; listed together with the applicable tests and performance criteria in accordance to sub-clause 7.2 of EN 55014-2:

Category III: Battery powered apparatus (with built-in batteries or external batteries) which in normal use is not connected to the mains, containing electronic control circuitry with no internal clock frequency or oscillator frequency higher than 15 MHz

Test Applicable for Category III Equipment:

Performance Criteria

(1) Electrostatic Discharge (ESD)
Case I. If the equipment are appliances or toys using score or data entered by the user

B



Definitions of Performance criteria

- **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 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 however allowed. 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 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.

Classification of Observations

Observation	Description
A	Satisfying Performance Criterion A
B	Satisfying Performance Criterion B
C	Satisfying Performance Criterion C
D	Loss of function or degradation of performance which is not recoverable, owing to damage to hardware or software, or loss of data



Application of direct discharges

i) Contact Discharge

The ESD generator is held with its tip of the contact discharge electrode perpendicular to the surface of the point of the sample enclosure to be tested. The tip of electrode shall firmly touch the surface of the point to be tested prior to charging up the electrode and application of discharge to the point under test.

At least 10 positive discharges and 10 negative discharges are applied to each accessible and dischargeable metal parts of the enclosure with an interval of at least 1 second between successive discharges.

Remark: No accessible metal part

ii) Air Discharge

The ESD generator is held with its tip of the air discharge electrode charged up prior to the application of discharge. The tip of charged electrode shall be brought to the surface of the point to be tested as fast as possible without causing any mechanical damage to the sample.

At least 10 positive discharges and 10 negative discharges are applied to each dischargeable but un-accessible metal parts or non-metal parts of the enclosure with an interval of at least 1 second between successive discharges.

Points of discharge	Polarity	Applied voltage (kV)	Performance criterion	Observation	Result
Enclosure	-	8	B	A	Meet
	+	8	B	A	Meet

Remark: A, normal performance

Application of indirect discharges

i) Discharge on Horizontal Coupling Plane (HCP)

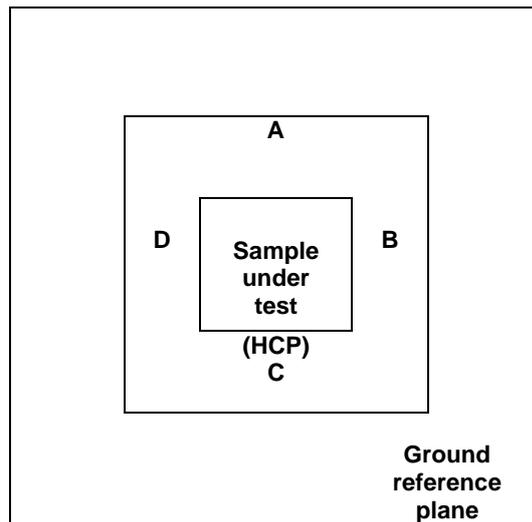
The electrostatic discharge generator is held horizontally in plane of the horizontal coupling plane (HCP), with the contact discharge electrode firmly touching the edge of the HCP. The tip of the electrode shall be at a distance of 0.1 m from the side of the sample being tested.

At least 10 positive discharges and 10 negative discharges are applied with an interval of not less than 1 second between each discharge.

Points of discharge	Polarity	Applied voltage (kV)	Performance criterion	Observation	Result
Position A, B, C, D	-	4	B	A	Meet
	+	4	B	A	Meet

Remark: A, normal performance

Figure 1:



ii) Discharge on Vertical Coupling Plane (VCP)

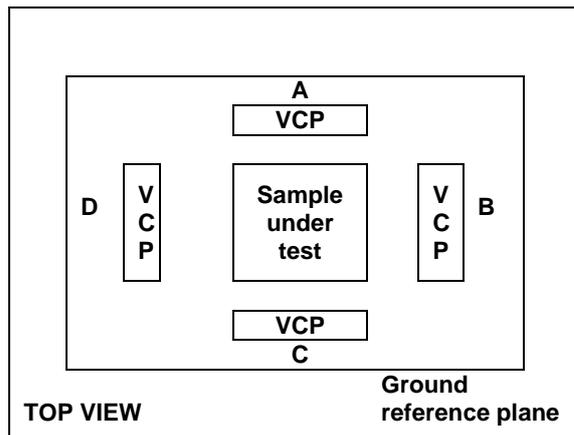
The electrostatic discharge generator is positioned horizontally to the center of the edge of the Vertical Coupling Plane (VCP) which is located vertically 0.1 m from the sample with contact discharge electrode touching the vertical coupling plane.

At least 10 positive discharges and 10 negative discharges are applied with an interval of not less than 1 second between each discharge.

Points of discharge	Polarity	Applied voltage (kV)	Performance criterion	Observation	Result
Position A, B, C, D	-	4	B	A	Meet
	+	4	B	A	Meet

Remark: A, normal performance

Figure 2:





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RESULTS:



END OF REPORT