TEST REPORT No: (5214)289-0237

TEST REPORT

To:	**MGA ENTERTAINMENT (HK) LTD**	To:	-
Attn:	Roy Au / Tracy Wan	Attn:	-
Address:	30th Floor, One Kowloon, 1 Wang Yuen Street, Kowloon Bay, Kowloon, Hong Kong.	Address:	-
Fax:	(0755)-33037666	Fax:	-
E-mail:	rau@mgae.com / tracy.wan@mgae.com	E-mail:	-
Folder No.:	--		
Factory name:	SEWCO		
Location:	--		
Product:	BABY born® Bathtub Model No.: 818183-116713		

(Please see the Exhibition – External Photo)	Sample No:	(5214)289-0237
	Test Date(s):	October 27, 2014
	Test Requested:	FCC Part 15 – 2012
	Test Method:	ANSI C63.4 – 2009
	FCC ID:	LU9818183

The results given in this report are related to the tested specimen of the described electrical apparatus.

CONCLUSION: The submitted sample was found to COMPLY with requirement of FCC Part 15 Subpart C.

Authorized Signature:

Reviewed by: Keith Yeung	Approved by: Steven Tsang
Date: November 04, 2014	Date: November 04, 2014

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5214)289-0237

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	☒	☐
Frequency range of Fundamental Emission	ANSI C63.4	☒	☐
26dB Bandwidth of Fundamental Emission	ANSI C63.4	☒	☐
Frequency Drift	ANSI C63.4	☒	☐

Report Revision & Sample Re-submit History:

--

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5214)289-0237

Location of the test laboratory

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

List of measuring equipment

Radiated Emission

EQUIPMENT	MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATION DUE
EMI TEST RECEIVER	R&S	ESCI	100379	20-JAN-2015
SIGNAL ANALYZER 40GHZ	R&S	FSV 40	100977	12-MAY-2015
LOOP ANTENNA	ETS-LINDGREN	6502	00102266	19-OCT-2015
BILOG ANTENNA	SCHAFFNER	CBL6112D	25229	02-JAN-2015
OPEN AREA TEST SITE	BVCPS	N/A	N/A	06-JUL-2015
ANECHOIC CHAMBER	ALBATROSS	M-CDC	80374004499B	04-FEB-2015
COAXIAL CABLE	SUHNER	N/A	N/A	22-SEP-2015

Frequency error and Frequency drift, Modulation bandwidth, Frequency stability

EQUIPMENT	MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATION DUE
EMI TEST RECEIVER	ROHDE & SCHWARZ	ESCI	100379	20-JAN-2015
SIGNAL ANALYZER 40GHZ	R&S	FSV 40	100977	12-MAY-2015
CLIMATIC CHAMBER	EMV	TH-22P2S	N/A	17-JUN-2015

Remarks:-
N/A : Not Applicable or Not Available

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

BUREAU VERITAS HONG KONG LIMITED –
Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5214)289-0237

Equipment Under Test [EUT]

Description of Sample:

Product:	BABY born® Bathtub
Model No.:	818183-116713
Additional Model name:	--
Additional Model number:	--
Additional Model Information:	--
Power Supply:	4.5Vd.c. (“AA” size battery x 3)

Description of EUT Operation:

The Equipment Under Test (EUT) is a **MGA ENTERTAINMENT LTD** of RFID toy. The transceiver with 1 Tag is operating at 13.561MHz. The transceiver continues to transmit when buttons is turn to ON and the Passive Tags provoked the signal transmission when the transceiver track on them. Modulation by IC, and type is amplitude modulation.
The transceiver has different control:

1. Switch – on/off and try me mode control
2. Button – sound and light control

Antenna Requirement (Section 15.203)

The EUT is use of a permanently antenna. The antenna consists of 60cm long PCB Trace. It is soldered on the PCB. The antenna is not replaceable or user serviceable. The requirements of S15.203 are met. There are no deviations or exceptions to the specifications.

Photo of Antenna

(Please see the Exhibition – Internal Photo)

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5214)289-0237

Test Results

Radiated Emissions (Fundamental)

Test Requirement:	FCC Part 15 Section 15.225
Test Method:	ANSI C63.4
Test Date(s):	2014-10-27
Temperature:	28.0 °C
Humidity:	71.0 %
Atmospheric Pressure:	100.9 kPa
Mode of Operation:	Transmission mode
Tested Voltage:	4.5Vd.c. ("AA" size battery x 3)

Test Procedure:

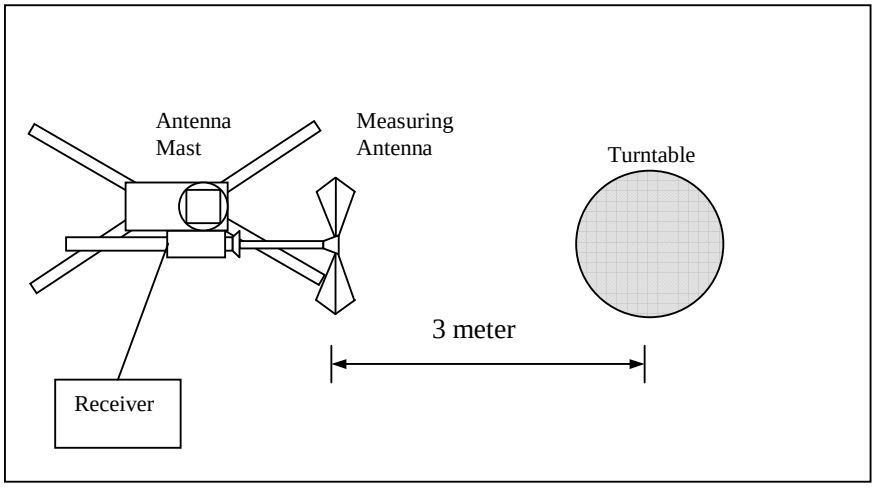
Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2009.

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 perform 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 place 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



BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5214)289-0237

Limits for Field Strength of Fundamental Emissions [FCC 47CFR 15.225]:

Frequency Range of Fundamental [MHz]	Field Strength of Fundamental Emission at 3m
13.553-13.567	124 dBµV/m

Measurement Data

Test Result of (Transmission mode): PASS

Detection mode: Quasi-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)
13.561	V/0°	13.5	56.8	124.0	-67.2

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 100KHz
VBW = 300KHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5214)289-0237

Radiated Emissions (9kHz – 1GHz)

Test Requirement:	FCC Part 15 Section 15.209
Test Method:	ANSI C63.4
Test Date(s):	2014-10-27
Temperature:	28.0 °C
Humidity:	71.0 %
Atmospheric Pressure:	100.9 kPa
Mode of Operation:	Transmission mode / Try me mode
Tested Voltage:	4.5Vd.c. (“AA” size battery x 3)

Limits for Radiated Emissions [FCC 47 CFR 15.209]:

Frequency Range [MHz]	Quasi-Peak Limits [μV/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

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5214)289-0237

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)
176.293	H	10.6	34.9	43.5	-8.6
216.976	H	10.7	34.5	46.0	-11.5
311.903	H	15.4	39.1	46.0	-6.9
325.464	H	15.8	38.6	46.0	-7.4
393.269	H	17.2	38.3	46.0	-7.7
406.830	H	18.1	41.5	46.0	-4.5
420.391	H	18.5	38.7	46.0	-7.3
433.952	H	18.6	40.8	46.0	-5.2
596.684	H	20.8	38.2	46.0	-7.8
772.977	H	22.2	36.5	46.0	-9.5

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)
176.293	V	10.6	33.2	43.5	-10.3
216.976	V	10.7	25.6	46.0	-20.4
311.903	V	15.4	32.9	46.0	-13.1
325.464	V	15.8	31.6	46.0	-14.4
393.269	V	17.2	28.7	46.0	-17.3
406.830	V	18.1	31.8	46.0	-14.2
420.391	V	18.5	32.1	46.0	-13.9
433.952	V	18.6	35.7	46.0	-10.3
596.684	V	20.8	33.6	46.0	-12.4
772.977	V	22.2	34.1	46.0	-11.9

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 120KHz
VBW = 120KHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5214)289-0237
Measurement Data

Test Result of (Try me 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)
39.00	H	15.1	29.3	40.0	-10.7
124.52	H	14.8	24.5	43.5	-19.0
274.40	H	14.4	24.7	46.0	-21.3
383.28	H	16.8	26.4	46.0	-19.6
473.96	H	19.4	29.5	46.0	-16.5
530.36	H	20.0	30.2	46.0	-15.8

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)
39.00	V	15.1	28.7	40.0	-11.3
124.52	V	14.8	24.3	43.5	-19.2
274.40	V	14.4	24.9	46.0	-21.1
383.28	V	16.8	26.0	46.0	-20.0
473.96	V	19.4	29.1	46.0	-16.9
530.36	V	20.0	30.3	46.0	-15.7

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 120KHz
VBW = 120KHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5214)289-0237

26dB Bandwidth of Fundamental Emission

Test Requirement:	FCC 47 CFR 15.225
Test Method:	ANSI C63.4
Test Date(s):	2014-10-28
Temperature:	24.0 °C
Humidity:	55.0 %
Atmospheric Pressure:	101.3 kPa
Mode of Operation:	Transmission mode
Tested Voltage:	4.5Vd.c. (“AA” size battery x 3)

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:

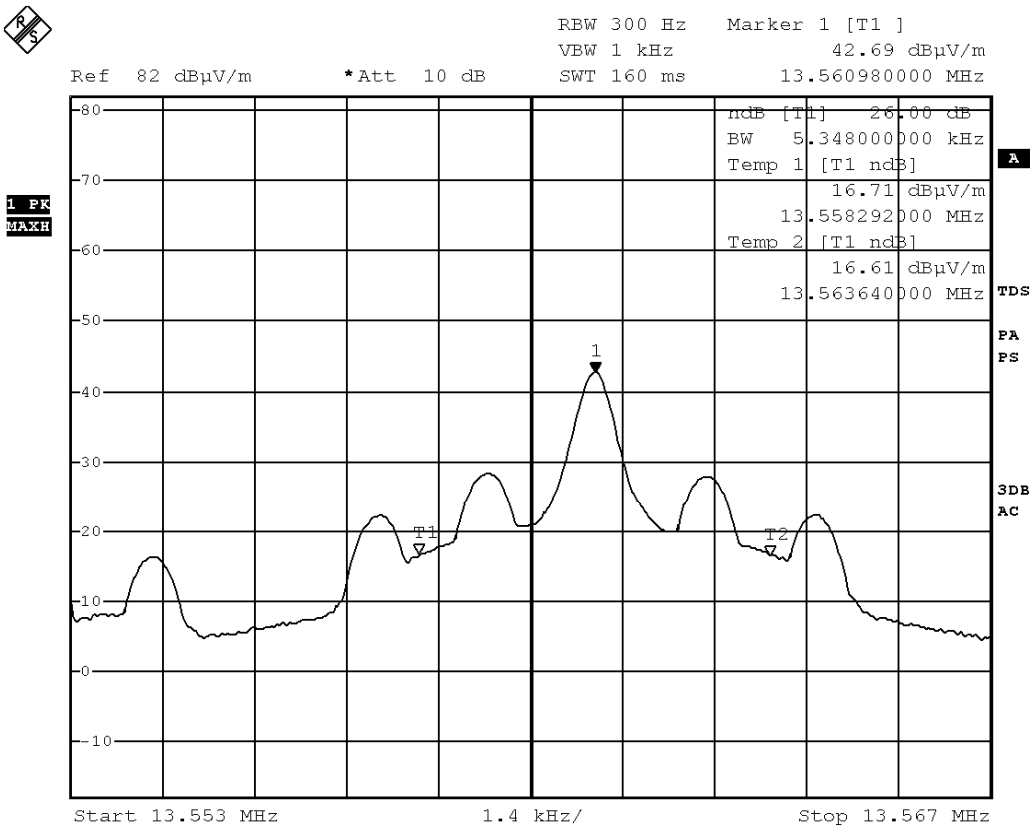
Frequency [MHz]	26dB Bandwidth [KHz]	Limits [MHz]
13.56098	5.348	within 13.553 – 13.567

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5214)289-0237

Measurement Data :

Test Result of 26dB Bandwidth of Fundamental Emission: PASS



BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5214)289-0237

Frequency Drift

Test Requirement:	FCC Part 15 Section 15.225
Test Method:	ANSI C63.4
Test Date(s):	2014-10-28
Temperature:	24.0 °C
Humidity:	55.0 %
Atmospheric Pressure:	101.3 kPa
Mode of Operation:	Transmission mode
Tested Voltage:	4.5Vd.c. (“AA” size battery x 3)

Test Setup:
The EUT was placed at a site with temperature control and supplied with power for extreme voltage testing. Antenna with suitable frequency range was used during the test.

The test was performed in accordance with ANSI C63.4.

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

Limit for Frequency Tolerance:

Maintained within +/- 0.01% of the operating frequency

Test Result of (Transmission mode): PASS

Test Condition		Nominal Transmit Frequency: 13.561MHz				
		Time				
		Start up	Two minutes after	Five minutes after	Ten minutes after	Frequency tolerance (%)
T_{nom}: 20℃	V_{nom}: 4.50V	13.56100	13.56100	13.56100	13.56100	N/A
T_{min}: -20℃	V_{nom}: 4.50V	13.56100	13.56100	13.56100	13.56100	0.00000
T_{max}: 50℃	V_{nom}: 4.50V	13.56100	13.56100	13.56100	13.56100	0.00000

Remarks:-
N/A: Not Applicable or Not Available

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5214)289-0237

Photographs of EUT

(Please see the Exhibition – External Photo & internal Photo)

Measurement of Radiated Emission Test Set Up

(Please see the Exhibition – Test Setup Photo)

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

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com