RF Exposure Report

Report No.: SA160317C23A

FCC ID: 2AH3O-RBB10

Test Model: RBB1.0

Received Date: Mar. 17, 2016

Test Date: Mar. 22, 2016

Issued Date: June 02, 2016

Applicant: Rapsodo Pte Ltd

Address: Block 67, Ayer Rajah Crescent, #04-10, Singapore 139950

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory

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Release Control Record

Issue No.	Description	Date Issued
SA160317C23A	Original release.	June 02, 2016

1 Certificate of Conformity

Product:	BaseBall Launch Monitor
Brand:	Rapsodo BaseBall
Test Model:	RBB1.0
Sample Status:	ENGINEERING SAMPLE
Applicant:	Rapsodo Pte Ltd
Test Date:	Mar. 22, 2016
Standards:	FCC Part 2 (Section 2.1093) KDB 447498 D01 General RF Exposure Guidance v06 IEEE C95.1-1992

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** June 02, 2016

Claire Kuan / Specialist

Approved by : _____ , **Date:** June 02, 2016

May Chen / Manager

2 RF Exposure

2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

2.2 MPE Calculation Formula

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Antenna Gain

The antenna provided to the EUT, please refer to the following table:

Brand	Model	Antenna Type	Gain (dBi)	Antenna Connector
Innosent	IPS-946	PCB	15	Solder

4 Calculation Result

24GHz wireless transceiver

Frequency Band (MHz)	Field Strength of Fundamental (dBuV/m) @1m	Pout EIRP (dBm)	Pout EIRP (mW)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
24126	121.4	16.63	46.026	20	0.00916	1

NOTE: Pout EIRP (dBm) = Field Strength of Fundamental (dBuV/m) @1m - 104.77 (dB)

WLAN 2.4GHz module (FCC ID: O7P-362)

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412-2462	97.7	2.15	20	0.03189	1

NOTE: Directional gain = 2.15dBi

Conclusion:

Both of the 24GHz wireless and WLAN 2.4GHz can transmit simultaneously, the formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1
CPD = Calculation power density
LPD = Limit of power density

Therefore, the worst-case situation is 0.00916 / 1 + 0.03189 / 1 = 0.04105, which is less than “1”.

Therefore the maximum calculations of above situations are less than the “1” limit.

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