

TEST REPORT

Report No.:	E20190815342601-2	Application No.:	E20190815342601
Applicant:	Eggplant Technologies Limited		
Address:	Flat/Rm 1903 19/F, Lee Garden One, 33 Hysan Avenue, Causeway Bay		
Sample Description:	Move It Beat		
Model:	MVDB0011		
Adding Model:	MVSS0000, MVDB0012, MVDB0013, MVDB0021, MVDB0022, MVDB0023, MVDB0031, MVDB0032, MVDB0033, MVDB1011, MVDB1012, MVDB1013, MVDB1021, MVDB1022, MVDB1023, MVDB1031, MVDB1032, MVDB1033, MVDB2011, MVDB2012, MVDB2013, MVDB2021, MVDB2022, MVDB2023, MVDB2031, MVDB2032, MVDB2033, MVHH0011, MVHH0012, MVHH0013, MVHH0021, MVHH0022, MVHH0023, MVHH0031, MVHH0032, MVHH0033, MVRB0011, MVRB0012, MVRB0013, MVRB0021, MVRB0022, MVRB0023, MVRB0031, MVRB0032, MVRB0033		
FCC ID:	2AKDVMVSSXX0000		
Test Specification:	KDB 447498 D01 General RF Exposure Guidance v06 FCC Part 2 §2.1091		
Test Date:	2019-08-23 to 2019-09-17		
Issue Date:	2019-10-15		
Test Result:	PASS		
Prepared By:	Reviewed By:	Approved By:	
Darry Wu / Test Engineer	Jimmy Xie / Technical Manager	Ryan Zhu / Manager	
			
Date: 2019-10-15	Date: 2019-10-15	Date: 2019-10-15	
Other Aspects:			
/			
Abbreviations: ok / P = passed; fail / F = failed; n.a. / N = not applicable			
The test result in this test report refers exclusively to the presented test sample. This report shall not be reproduced except in full, without the written approval of GRGT.			

DIRECTIONS OF TEST

1. This company carries out test task according to the national regulation of verifications which can be traced to National Primary Standards and BIPM.
2. The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory.
3. If there is any objection concerning the test, the client should inform the laboratory within 15 days from the date of receiving the test report.

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1. GENERAL DESCRIPTION OF EUT

1.1. APPLICANT

Name: Eggplant Technologies Limited
Address: Flat/Rm 1903 19/F, Lee Garden One, 33 Hysan Avenue, Causeway Bay

1.2. MANUFACTURER

Name: Guangzhou Eggplant Software Technologies Co., Ltd.
Address: A1 Room 509~513, Yi He Mansion, No.411 Shou Gou Ling Road, Tian He District, Guangzhou, China

1.3. FACTORY

Factory 1

Name : Guangzhou Eggplant Software Technologies Co., Ltd.
Address : A1 Room 509~513, Yi He Mansion, No.411 Shou Gou Ling Road, Tian He District, Guangzhou, China

1.4. BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

Equipment: Move It Beat
Model No.: MVDB0011
Adding Model: MVSS0000、MVDB0012、MVDB0013、MVDB0021、MVDB0022、MVDB0023、MVDB0031、MVDB0032、MVDB0033、MVDB1011、MVDB1012、MVDB1013、MVDB1021、MVDB1022、MVDB1023、MVDB1031、MVDB1032、MVDB1033、MVDB2011、MVDB2012、MVDB2013、MVDB2021、MVDB2022、MVDB2023、MVDB2031、MVDB2032、MVDB2033、MVHH0011、MVHH0012、MVHH0013、MVHH0021、MVHH0022、MVHH0023、MVHH0031、MVHH0032、MVHH0033、MVRB0011、MVRB0012、MVRB0013、MVRB0021、MVRB0022、MVRB0023、MVRB0031、MVRB0032、MVRB0033
Model
Discrepancy: 1. All model number listed in Appendix E uses the same smart sensor module MVSS0000.
2. The core components used in MVSS0000 is the same across all Product Series.
3. The first four letters of the 3 product series model number (MVDB0 __ __ __, MVHH0 __ __ __, MVRB0 __ __ __) will always remain the same, where the ending 4 digits of a product series will increase in value depending on product number reference, hardware revisions, additional

features or accessory bundle, and product weight differences. Essentially, the minor variations are created to address different regional market needs.

Trade Name:	move it
Power supply:	DC3.7V
Frequency Range:	2402 ~ 2480 MHz
Transmit Power:	1.52dBm
Type of Modulation:	GFSK for 1Mbps
Antenna Specification:	PCB Antenna with 0dBi gain (Max)
Temperature Range:	-10°C ~ +60°C
Hardware Version:	Version: V2.0
Software Version:	Version: V1.0.7

2. LABORATORY AND ACCREDITATIONS

The tests and measurements refer to this report were performed by EMC Laboratory of GRG METROLOGY & TEST (SHENZHEN) CO., LTD

Add.: No.1301 Guanguang Road Xinlan Community, Guanlan Street, Longhua District Shenzhen, 518110, People's Republic of China

Telephone: +86-755-61180008

Fax: /

3. ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies.

A2LA	Certificate Number 2861.01
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4. Evaluation method

Exposure category: General population/uncontrolled environment

EUT Type: Production Unit

Device Type: Mobile Device

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

In accordance with KDB447498D01 for Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modeled or measured field strengths or power density, is ≤ 1.0 . The MPE ratio of each antenna is determined at the minimum test separation distance required by the operating configurations and exposure conditions of the host device, according to the ratio of field strengths or power density to MPE limit, at the test frequency. Either the maximum peak or spatially averaged results from measurements or numerical simulations may be used to determine the MPE ratios. Spatial averaging does not apply when MPE is estimated using simple calculations based on far-field plane-wave equivalent conditions. The antenna installation and operating requirements for the host device must meet the minimum test separation distances required by all antennas, in both standalone and simultaneous transmission operations, to satisfy compliance.

5. Limits for General Population/Uncontrolled Exposure

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

6. Calculation Method

Predication of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4\pi R^2$$

Where: S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna

From the EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the maximum gain of the used 0dBi for BT, the RF power density can be obtained.

Frequency Band	Antenna type and antenna number	Maximum antenna gain
2.4GHz	BT Antenna	0 dBi

7. Estimation Result

7.1. Conducted Power Results

Bluetooth

Mode	Channel	Frequency(MHz)	Peak Conducted Output Power (dBm)
GFSK-BLE	00	2402	1.52
	19	2440	1.51
	39	2480	1.44

7.2. Manufacturing tolerance

GFSK			
Frequency (MHz)	2402	2440	2480
Target (dBm)	1	1	1
Tolerance ±(dB)	1.0	1.0	1.0

7.3. Measurement Results

7.3.1. Standalone MPE

Mode	Output power		Antenna Gain (dBi)	Antenna Gain (linear)	Duty Cycle	MPE (mW/cm ²)	MPE Limits (mW/cm ²)
	(dBm)	(mW)					
GFSK-BLE	2	1.5848	0	1	100%	0.00032	1.0000

Remark:

1. *Maximum power including tune-up tolerance;*
2. *MPE use distance is 20cm from manufacturer declaration of user manual.*

8. Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

APPENDIX A: THE CUSTOMER STATEMENT

Product Model Designation

A.	Brand	Move It																																																	
B.	Product	Move It Smart Sensor Module (MVSS000)																																																	
C.	Associated with Product Series	Dumbbell: MVDB Hula Hoop: MVHH Resistance Band: MVRB																																																	
D.	Model Number Abbreviation Definition and Number Range of Use	<div>MV = Move It (Brand)</div> <div>DB* = Dumbbell (Product Category)</div> <div>0 = Product launch order (from 0-9)</div> <div>0 = Version of hardware revision (from 1-9)</div> <div>0 = Designation for feature or accessory bundle (from 1-9)</div> <div>1 = Designation for product weight differentiation (from 1-9)</div> <div></div> <div>Product Categories Abbreviations</div> <div></div> <div>SS for smart sensor</div> <div>DB for dumbbell</div> <div>HH for hula hoop</div> <div>RB for resistance band</div>																																																	
E.	Sample List of Associated Model Numbers	<div>MVSS0000</div> <table><tr><td>MVDB0011</td><td>MVDB1011</td><td>MVDB2011</td><td>MVHH0011</td><td>MVRB0011</td></tr><tr><td>MVDB0012</td><td>MVDB1012</td><td>MVDB2012</td><td>MVHH0012</td><td>MVRB0012</td></tr><tr><td>MVDB0013</td><td>MVDB1013</td><td>MVDB2013</td><td>MVHH0013</td><td>MVRB0013</td></tr><tr><td>MVDB0021</td><td>MVDB1021</td><td>MVDB2021</td><td>MVHH0021</td><td>MVRB0021</td></tr><tr><td>MVDB0022</td><td>MVDB1022</td><td>MVDB2022</td><td>MVHH0022</td><td>MVRB0022</td></tr><tr><td>MVDB0023</td><td>MVDB1023</td><td>MVDB2023</td><td>MVHH0023</td><td>MVRB0023</td></tr><tr><td>MVDB0031</td><td>MVDB1031</td><td>MVDB2031</td><td>MVHH0031</td><td>MVRB0031</td></tr><tr><td>MVDB0032</td><td>MVDB1032</td><td>MVDB2032</td><td>MVHH0032</td><td>MVRB0032</td></tr><tr><td>MVDB0033</td><td>MVDB1033</td><td>MVDB2033</td><td>MVHH0033</td><td>MVRB0033</td></tr></table>					MVDB0011	MVDB1011	MVDB2011	MVHH0011	MVRB0011	MVDB0012	MVDB1012	MVDB2012	MVHH0012	MVRB0012	MVDB0013	MVDB1013	MVDB2013	MVHH0013	MVRB0013	MVDB0021	MVDB1021	MVDB2021	MVHH0021	MVRB0021	MVDB0022	MVDB1022	MVDB2022	MVHH0022	MVRB0022	MVDB0023	MVDB1023	MVDB2023	MVHH0023	MVRB0023	MVDB0031	MVDB1031	MVDB2031	MVHH0031	MVRB0031	MVDB0032	MVDB1032	MVDB2032	MVHH0032	MVRB0032	MVDB0033	MVDB1033	MVDB2033	MVHH0033	MVRB0033
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F. Model Number Variations In Detail
<p>All model number listed in Appendix E uses the same smart sensor module MVSS0000. The core components used in MVSS0000 is the same across all Product Series. As an example, MVDB00 ____ has a designated slot to fit the smart sensor module. For the Hula Hoop and Resistance Band product series, an additional adapter is provided to secure the smart sensor module in place.</p> <p>The first four letters of the 3 product series model number (MVDB0 ____ MVHH0 ____ MVRB0 ____) will always remain the same, where the ending 4 digits of a product series will increase in value depending on product number reference, hardware revisions, additional features or accessory bundle, and product weight differences. Essentially, the minor variations are created to address different regional market needs.</p> <p>Eggplant Technologies Ltd. Correspondent: Oscar Wong September 18, 2019</p>

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