# General RF Exposure Test Report

Report No.: AGC01883140704FE07

| | | |
|---|---|---|
| **FCC ID** | : | 2ACZFHHRT4 |
| **APPLICATION PURPOSE** | | Original Equipment |
| **PRODUCT DESIGNATION** | : | evoLution |
| **BRAND NAME** | : | evoLution Series |
| **TEST MODEL** | : | HHRT4 |
| **CLIENT** | : | Olive Bay Pty Ltd. |
| **DATE OF ISSUE** | : | Sep. 23, 2014 |
| **STANDARD(S)** | : | KDB447498 D01 |
| **REPORT VERSION** | : | V1.0 |

***A***ttestation of ***G***lobal ***C***ompliance (Shenzhen) Co., Ltd

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## Report Revise Record

| Report Version | Revise Time | Issued Date | Valid Version | Notes |
|---|---|---|---|---|
| V1.0 | / | Sep. 23, 2014 | Valid | Original Report |

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## 1. TEST RESULT CERTIFICATION

| | |
|---|---|
| **Applicant Name:** | Olive Bay Pty Ltd. |
| **Address:** | PO Box 139, Chatswood, NSW, Australia, 2067 |
| **Manufacturer Name:** | Olive Bay Pty Ltd. |
| **Address:** | PO Box 139, Chatswood, NSW, Australia, 2067 |
| **Product Designation** | evoLution |
| **Brand Name** | evoLution Series |
| **Test Model** | HHRT4 |
| **Test Standard** | KDB447498 D01 General RF Exposure Guidanc v05r02 |
| **Date of Test:** | Sep. 09,2014 to Sep. 22,2014 |

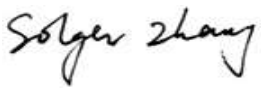
We (AGC), Attestation of Global Compliance (Shenzhen) Co., Ltd. for compliance with the requirements set forth in the KDB447498 D01 General RF Exposure Guidanc v05r02. The results of testing in this report apply to the product/system which was tested only.

Tested by 

Bart Xie Sep. 23, 2014

Checked By 

Kidd Yang Sep. 23, 2014

Authorized By 

Solger Zhang Sep. 23, 2014

## 2. TECHNICAL INFORMATION

Note: the following data is based on the information by the applicant.

**EUT DESCRIPTION**

A major technical description of EUT is described as following:

| | |
|---|---|
| Product Designation: | evoLution |
| Hardware version: | V1.0 |
| Software version: | N/A |
| Operation Frequency: | 2405.00-2480.00MHz, (Channel Number: 16, Channel Frequency=2405+5(K-1), K=1, 2, 3 ……16) |
| Modulation: | OQPSK |
| Power Supply: | DC3.7V/110mAh |
| Antenna Designation**:** | Integrated Antenna |
| Average Power: | 10.89dBm Maximum |
| Extreme Temp. Tolerance | -10℃ to +55℃ |
| *** Note: The EUT couldn't be operating normally with higher or lower voltage. | |

# 3. RF EXPOSURE MEASUREMENT

## 3.1 INTRODUCTION

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

The 1992 ANSI/IEEE standard (See Listed limit table) specifies a minimum separation distance of 20 cm for performing reliable field measurements to determine adherence to MPE limits.

If the minimum separation distance between a transmitter and nearby persons is more than 20 cm under normal operating conditions, compliance with MPE limits may be determined at such distance from the transmitter. When applicable, operation instructions and prominent warning labels may be used to alert the exposed persons to maintain a specified distance from the transmitter or to limit their exposure durations and usage conditions to ensure compliance.

**3.2 FCC LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)**

LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE

| Frequency Range (MHz) | E-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 | ($180/f^2$)* | 30 |
| 30 -- 300 | 27.5 | 0.073 | 0.2 | 30 |
| 300 -- 1500 | -- | -- | f/1500 | 30 |
| 1500 -- 100,000 | -- | -- | 1.0 | 30 |

*Note:

1. f= Frequency in MHz * Plane-wave Equivalent Power Density
2. The averaging time for General Population/Uncontrolled exposure to fixed transmitters is not applicable for mobile and portable transmitters. See 47 CFR §§2.1091 and 2.1093 on source-based time-averaging requirement for mobile and portable transmitters.

## 4. CLASSIFICATION OF THE ASSESSMENT METHODS

According to user manual, The antenna of the product, under normal use condition is at least 20cm away from the body of the user. Warning statement to the user for keeping at least 20cm separation distance and the prohibition of operating to a person has been printed on the user's manual. So, this product under normal use is located on electromagnetic far field between the human body.

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

## 5. EUT OPERATION CONDITION

Make the EUT to transmit at lowest, middle and highest channel individually.

## 6. TEST RESULTS

Note: report the worst result in this part

Antenna Gain=1.0dBi (Numeric 1.25), π=3.141

| Frequency | Output Power | Output Power | Power Density | Power Density Limit | Result |
|---|---|---|---|---|---|
| MHz | dBm | mW | $mW/cm^2$ | $mW/cm^2$ | Pass/Fail |
| 2405 | 10.96 | 12.47 | 0.0031 | 1.000 | Pass |

***Note:***

*The output power is refer to AGC01883140704FE04.*

*According to the user manual, the minimum separate distance which used for MPE calculate is 20cm.*