



Shenzhen Huaxia Testing Technology Co., Ltd

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

Telephone: +86-755-26648640

Fax: +86-755-26648637

Website: www.cqa-cert.com

Report Template Version: V04

Report Template Revision Date: 2018-07-06

RF Exposure Evaluation Report

Report No.: CQASZ20210500598E-03
Applicant: Dongguan Nuoyifan Technology Co., Ltd.
Address of Applicant: Room 401, No.22, 3th Street, Jinqianling, Huangjiang Town, Dongguan, Guangdong
Equipment Under Test (EUT):
EUT Name: POCKET EGG PAIR
Model No.: RAY-M002
Brand Name: N/A
FCC ID: 2AYHJ-RAY-M002
Standards: 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF Exposure Guidance v06
Date of Receipt: 2021-5-10
Date of Test: 2021-5-10 to 2021-5-19
Date of Issue: 2021-5-19
Test Result: PASS*

*In the configuration tested, the EUT complied with the standards specified above

Tested By:

Lewis Zhou

(Lewis Zhou)

Reviewed By:

Jun Li

(Jun Li)

Approved By:

Sheek Luo

(Sheek Luo)



1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20210500598E-03	Rev.01	Initial report	2021-5-19

2 Contents

	Page
1 VERSION.....	2
2 CONTENTS.....	3
.....	3
3 GENERAL INFORMATION.....	4
3.1 CLIENT INFORMATION.....	4
3.2 GENERAL DESCRIPTION OF EUT.....	4
3.3 GENERAL DESCRIPTION OF BLE.....	4
4 SAR EVALUATION.....	5
4.1 RF EXPOSURE COMPLIANCE REQUIREMENT.....	5
4.1.1 <i>Standard Requirement</i>	5
4.1.2 <i>Limits</i>	5
4.1.3 <i>EUT RF Exposure</i>	6

3 General Information

3.1 Client Information

Applicant:	Dongguan NuoyifanTechnology Co.,Ltd.
Address of Applicant:	Room 401, No.22, 3th Street, Jinqianling, Huangjiang Town, Dongguan, Guangdong
Manufacturer:	Dongguan NuoyifanTechnology Co.,Ltd.
Address of Manufacturer:	Room 401, No.22, 3th Street, Jinqianling, Huangjiang Town, Dongguan, Guangdong
Factory:	Dongguan NuoyifanTechnology Co.,Ltd.
Address of Factory:	Room 401, No.22, 3th Street, Jinqianling, Huangjiang Town, Dongguan, Guangdong

3.2 General Description of EUT

Product Name:	POCKET EGG PAIR
Model No.:	RAY-M002
Trade Mark:	N/A
EUT Supports Radios application:	Bluetooth Dual mode 2402-2480MHz
Hardware Version:	V1.1
Software Version:	V1.0
Sample Type:	☐ Mobile ☒ Portable ☐ Fix Location
Power Supply:	EUT is powered by 2*AA size batteries

3.3 General Description of BLE

Operation Frequency:	2402MHz~2480MHz
Modulation Type:	GFSK
Transfer Rate:	1Mbps
Number of Channel:	40
Test Software of EUT:	PCB antenna
Antenna Type:	-6.72032 dBi
Antenna Gain:	EUT is powered by 2*AA size batteries

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

4.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$\frac{[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})]}{[\sqrt{f(\text{GHz})}]} \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

4.1.3 EUT RF Exposure

1) For BLE (module 1)

Measurement Data

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-3.78	-5±1	-4	0.398
Middle(2440MHz)	-2.92	-4±1	-3	0.501
Highest(2480MHz)	-2.39	-3.5±1	-2.5	0.562

Worst case: GFSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune- up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	-3.78	-5±1	-4	0.398	0.123	3.0
Middle (2440MHz)	-2.92	-4±1	-3	0.501	0.157	
Highest (2480MHz)	-2.39	-3.5±1	-2.5	0.562	0.177	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20210500598E-01

BDR, EDR and BLE can not simultaneous transmitting at same time.

2) For BLE (module 2)

Measurement Data

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-3.75	-5±1	-4	0.398
Middle(2440MHz)	-2.9	-4±1	-3	0.501
Highest(2480MHz)	-2.39	-3.5±1	-2.5	0.562

Worst case: GFSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	-3.75	-5±1	-4	0.398	0.123	3.0
Middle (2440MHz)	-2.9	-4±1	-3	0.501	0.157	
Highest (2480MHz)	-2.39	-3.5±1	-2.5	0.562	0.177	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20210500598E-02

BDR, EDR and BLE can not simultaneous transmitting at same time.

3) For BLE (module1+ 2)

Worst case: GFSK		
Maximum tune-up Power	Calculated value	Exclusion threshold
(mW)		
0.796	0.246	3.0
1.002	0.314	
1.124	0.354	
Conclusion: the calculated value ≤ 3.0 , SAR is exempted.		