

#### Shenzhen Most Technology Service Co., Ltd.

No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, Guangdong, China.

# **RF Exposure Evaluation Report**

Compiled by

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Supervised by

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Approved by

( position+printed name+signature)..: Manager Yvette Zhou

Date of issue...... Dec. 22,2023

Representative Laboratory Name.: Shenzhen Most Technology Service Co., Ltd.

Nanshan, Shenzhen, Guangdong, China.

Applicant's name...... RNG International Inc.

Test specification/ Standard ..........: 47 CFR Part 1.1307

47 CFR Part 2.1093

TRF Originator...... Shenzhen Most Technology Service Co., Ltd.

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Test item description ...... BT-2 Bluetooth Module

Trade Mark ...... RENOGY

Model/Type reference...... RCM-BT2

Listed Models ...... N/A

Modulation Type ...... GFSK

Operation Frequency...... From 2402MHz to 2480MHz

Hardware Version...... V0

Software Version ...... V0

Rating ...... Power supply through RJ45

Result...... PASS

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## TEST REPORT

Equipment under Test : BT-2 Bluetooth Module

Model /Type : RCM-BT2

Listed Models : N/A

Remark N/A.

Applicant : RNG International Inc.

Address : 5050 S Archibald Ave, Ontario, CA 91762, USA

Manufacturer : RENOGY New Energy Co., Ltd

Room 624-625, Taicang German Overseas Students Pioneer

Address Park, No.66 Ningbo East Road, Taicang Economic

Development Zone, Taicang, Jiangsu 215000, China.

Test Result:	PASS
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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.

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# 1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2023.12.22	Initial Issue	Alisa Luo

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# 2. SAR Evaluation

### 2.1 RF Exposure Compliance Requirement

#### 2.1.1 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.

#### **2.1.2 Limits**

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

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

f(GHz) is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>

The result is rounded to one decimal place for comparison

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

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# 2.1.3 EUT RF Exposure

### Measurement Data

BLE

GFSK					
Test channel	Peak Output Power	Tune up tolerance	Maximum tune-up Power		
	(dBm)	(dBm)	(dBm)		
Lowest(2402MHz)	1.729	1.729±1	2.729		
Middle(2440MHz)	2.708	$2.708 \pm 1$	3.708		
Highest(2480MHz)	1.885	1.885±1	2.885		

Worst case: GFSK						
Channel	Maximum Peak Channel Conducted Output	Maximum tune-up Power		Calculated value	Exclusion threshold	SAR Test Exclusion
Power (dBm)	(dBm)	(mW)				
Middle(2440MHz)	2.708	3.708	2.35	0.73	3.0	Yes

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