

RF Exposure Report

Report No.: SA200608D03-2

FCC ID: 2AM5A-TCTRLR

Test Model: TrueControl

Received Date: Jun. 8, 2020

Test Date: Jul. 27 to Nov. 3, 2020

Issued Date: Nov. 3, 2020

Applicant: RHA Technologies Limited

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Table of Contents

Release Control Record	3
1 Certificate of Conformity	4
2 Evaluation Result	5
3 SAR Test Exclusion Thresholds	6
4 Conclusion	7

Release Control Record

Issue No.	Description	Date Issued
SA200608D03-2	Original release.	Nov. 3, 2020

1 Certificate of Conformity

Product: Bluetooth Headset

Brand: RHA

Test Model: TrueControl

Sample Status: Engineering sample

Applicant: RHA Technologies Limited

Test Date: Jul. 27 to Nov. 3, 2020

Standards: FCC Part 2 (Section 2.1093)

IEEE C95.1-1992

References Test Guidance: KDB 447498 D01 General RF Exposure Guidance v06

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 RF characteristics under the conditions specified in this report.

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Approved by : Rex Lai, **Date:** Nov. 3, 2020
Rex Lai / Associate Technical Manager

2 Evaluation Result

Following FCC KDB 447498 D01 "General SAR test exclusion guidance"

The corresponding SAR Exclusion Threshold condition, listed below:

1) 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:

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

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz.
- Power and distance are rounded to the nearest mW and mm before calculation.
- 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.

2) At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following:

- a) $[\text{Threshold at } 50 \text{ mm in step 1)} + (\text{test separation distance} - 50\text{mm}) \cdot (f(\text{MHz})/150)] \text{ mW}$, at 100MHz to 1500 MHz
- b) $[\text{Threshold at } 50 \text{ mm in step 1)} + (\text{test separation distance} - 50 \text{ mm}) \cdot 10] \text{ mW}$ at $> 1500 \text{ MHz}$ and $\leq 6 \text{ GHz}$

3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion.

- a) The threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by $[1 + \log(100/f(\text{MHz}))]$ for test separation distances > 50 mm and < 200 mm.
- b) The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by $\frac{1}{2}$ for test separation distances ≤ 50 mm.
- c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

3 SAR Test Exclusion Thresholds

Maximum measured transmitter power:

Function	Frequency (GHz)	Tune-up Power (dBm)	Min. test separation distance (mm)	SAR test exclusion calculation value ^(NOTE 3)	1-g SAR test exclusion thresholds	Result
BT LE	2.402 ~ 2.480	4	5	0.778	3	Pass

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. The antenna type is PIFA antenna with -7.27dBi gain.
3. Calculate SAR test exclusion thresholds from condition "1" formulas.
4. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

Maximum measured transmitter power:

Function	Tune-up Power (dBm)	*Time Average Power (dBm)	*Time Average Power (mW)	Min. test separation distance (mm)	SAR test exclusion calculation value ^(NOTE 3)	1-g SAR test exclusion thresholds	Result
BT EDR	10	8.97	7.889	5	2.444	3	Pass

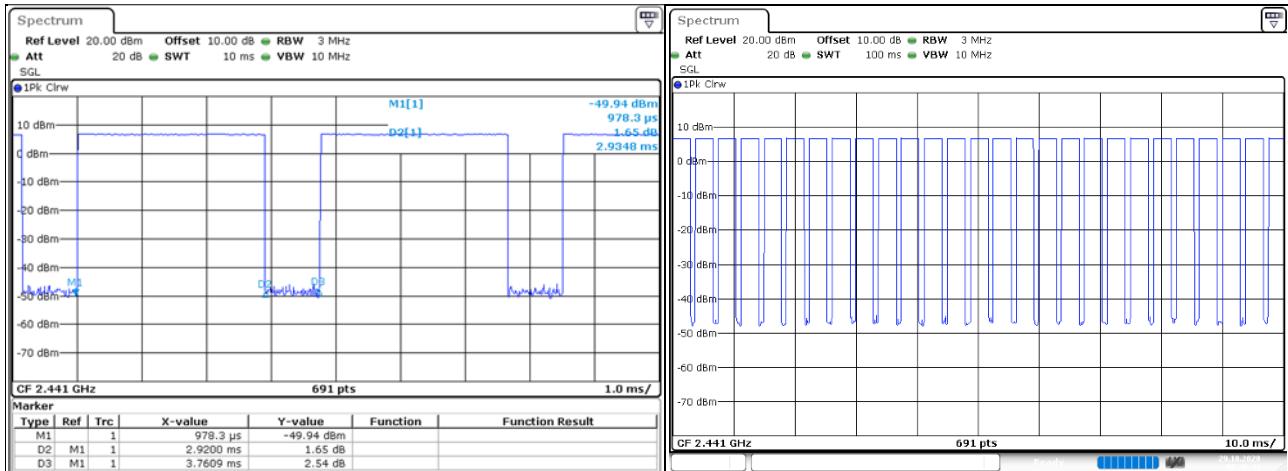
Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. The antenna type is PIFA antenna with -7.27dBi gain.
3. Calculate SAR test exclusion thresholds from condition "1" formulas.
4. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.
5. *Time Average Power = Tune-up Power + Duty Factor = 10 + (-1.03) = 8.97

Duty Cycle of Test Signal For BT EDR

Duty Cycle	Tx pulse (ms)	Pulse count per 100ms (times)	Tx on per 100 (ms)	Duty Factor (dB)
	2.92	27	78.84	-1.03

Note: The duty cycle correlation factor be equal to: $10\log(Tx\ on/100ms) = -1.03$



* BT EDR has been consider the maximum duty factor under normal communication.

4 Conclusion

Since Source-base time average power is below SAR test exclusion power thresholds, the SAR evaluation is not required.

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