



Test Report No.:
FCC2025-0063-H

TEST REPORT

FCC ID	:	2AGOFRC421H
Applicant	:	HCS (Suzhou) Limited
Product Name	:	Remote Control
		RC4213409/01BR,RC4213802/01BR, RC4213404/01BR,RC4213405/01BR, RC4213406/01BR,RC4213803/01BR, RC4213804/01BR,RC4213407/01BR, RC4213408/01BR,RC4213410/01BR, Babylon RCU,RC421XXXX/XXR, RC421XXXX/XXBR ('X'=0-9,'B' means packed with battery)
Model No.	:	

CVC Testing Technology Co., Ltd.

Product Name	Remote Control	Trade Mark	—
Type/Model	RC4213409/01BR,RC4213802/01BR, RC4213404/01BR,RC4213405/01BR, RC4213406/01BR,RC4213803/01BR, RC4213804/01BR,RC4213407/01BR, RC4213408/01BR,RC4213410/01BR, Babylon RCU,RC421XXXX/XXR, RC421XXXX/XXBR ('X'=0-9,'B' means packed with battery)	Sample Status	—
Applicant	HCS (Suzhou) Limited		
Applicant Address	19F-20F, Building B-3rd, No.209 Zhuyuan Road, New District, Suzhou, P.R.China		
Manufacturer	HCS (Suzhou) Limited		
Manufacturer Address	19F-20F, Building B-3rd, No.209 Zhuyuan Road, New District, Suzhou, P.R.China		
Producer	Himit (Yueyang) Technology Ltd.		
Producer Address	Building 4, Lingang High-tech Industrial Park, Yueyang Area, China (Hunan) Free Trade Pilot Zone		
Quantity of sample	1 pcs	Sample Identification	1-1
Tested According To	FCC Part 2 (Section 2.1093) KDB 447498 D01 IEEE C95.1	Test Item	RF Exposure
Receiving Date	2025.08.08	Date of Testing	2025.09.05
Test conclusion	The equipment under test was found to comply with the requirements of the standards applied. Final Verdict: Pass. Seal of CVC Date of issue: 2025-09-08		
Note 1: This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC.			

Approved by:

Chen Huawen



Reviewed by:

Xu Zhenfei



Tested by:

Lu Weiji



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1. General Product Information

1.1 General information

Product Name	Remote Control
Model No.	RC4213409/01BR
Additional model	RC4213802/01BR,RC4213404/01BR,RC4213405/01BR, RC4213406/01BR,RC4213803/01BR,RC4213804/01BR, RC4213407/01BR,RC4213408/01BR,RC4213410/01BR, Babylon RCU,RC421XXXX/XXR,RC421XXXX/XXBR ('X'=0-9,'B' means packed with battery)
Power Supply	DC 3.0V
Serial Number(SN)	/
Antenna Type	PCB antenna
Antenna Gain	Bluetooth: 1.13 dBi (provided by client) ZIGB(RF4CE): 1.13 dBi (provided by client)
Beamforming gain	Unsupported (provided by client)
Frequency Range	Bluetooth(LE_1M,2M): 2402~2480MHz ZIGB(RF4CE): 2405~2480MHz
Operate Temp.Range	0℃~45℃
Note: 1. The information of the EUT is declared by the manufacturer. 2. The laboratory is not responsible for the product technical specification provided by the client. 3. EUT photo refer to report (Report NO.:FCC2025-0063-EUT). 4. The EUT have SISO function, provides 1 completed transmitter and 1 receiver. 5. The remote control product of the covered model has the same electrical and mechanical structure as the EUT of the main inspection model. There are only cosmetic differences (color/painting/printing). The basic software architecture remains the same. Full tests were performed on the model: RC4213409/01BR.The test result covers other models. 6. Manufacturer's statement, LGL's RF4CE implementation uses 2 additional RF4CE channels, in addition to the 3 standard RF4CE channels, for a total of 5 channels. The 5 channels are CH11(2405MHz),CH15(2425MHz),CH20(2450MHz),CH25 (2475MHz) and CH26 (2480MHz).	

2. Human Exposure Assessment

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 Test Exclusion Threshold condition(s) listed below, is (are) satisfied. These test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring evaluation, adjusted for tune-up tolerance and the minimum test separation distance required for the exposure conditions.²⁸

The minimum test separation distance defined in 4.1 f) is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander. To qualify for SAR test exclusion, the test separation distances applied must be fully explained and justified, typically in the SAR measurement or SAR analysis report, by the operating configurations and exposure conditions of the transmitter and applicable host platform requirements, according to the required published RF exposure KDB procedures.

When no other RF exposure testing or reporting are required, a statement of justification and compliance must be included in the equipment approval, in lieu of the SAR report, to qualify for SAR test exclusion. When required, the device specific conditions described in the other published RF exposure KDB procedures must be satisfied before applying these SAR test exclusion provisions; for example, handheld PTT two-way radios, handsets, laptops and tablets, etc.²⁹

- a) For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:
 - 1) $[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{\text{(GHz)}}}] \leq 3.0$ for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR,³⁰ where
 - $f_{\text{(GHz)}}$ is the RF channel transmit frequency in GHz
 - Power and distance are rounded to the nearest mW and mm before calculation³¹
 - The result is rounded to one decimal place for comparison
 - The values 3.0 and 7.5 are referred to as numeric thresholds in step b) below
 - 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 according to 4.1 f) is applied to determine SAR test exclusion.
 - b) For 100 MHz to 6 GHz and test separation distances > 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following (also illustrated in Appendix B):³²
 - 1) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f_{\text{(MHz)}}/150)]\}$ mW, for 100 MHz to 1500 MHz
 - 2) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\}$ mW, for > 1500 MHz and ≤ 6 GHz
 - c) For frequencies below 100 MHz, the following may be considered for SAR test exclusion (also illustrated in Appendix C):
 - 1) For test separation distances > 50 mm and < 200 mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by $[1 + \log(100/f_{\text{(Hz)}})]$
 - 2) For test separation distances ≤ 50 mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by $\frac{1}{2}$
 - 3) 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 SAR test results below 100 MHz to be acceptable.³⁴

²⁷ Maximum conducted and radiated power should both be taken into consideration to establish the worst case aggregate maximum output power.

²⁸ Test exclusion is applied to the required test channels on a channel by channel basis.

²⁹ When SAR evaluation is required by the hotspot mode or UMPC mini-tablet procedures, that is, where an antenna is ≤ 2.5 cm from a surface or edge, the test separation distance from the phantom to the antenna or device enclosure as appropriate, should be applied to determine further SAR test exclusion according to the criteria in this document. Do not use the antenna to device surface or edge distance.

³⁰ This is equivalent to the formula written as: $[(\text{max. power of channel, including tune-up tolerance, mW} / (60 / f_{\text{(GHz)}} \text{ mW})] - [20 \text{ mm} / (\text{min. test separation distance, mm})] \leq 1.0$ for 1-g SAR;

also see Appendix A for approximate exclusion threshold numerical values at selected frequencies and distances.

³¹ Unless stated otherwise, the same rounding requirements should be applied to all similar equations in this document.

³² These are interim SAR test exclusion provisions. More extensive considerations are necessary to address threshold discontinuity issues related to transitioning from SAR to MPE limits at intermediate distances and different frequencies. See FNPRM in ET Docket No. 13-84.

³³ See footnote 32

³⁴ Certain SAR systems are beginning to support measurements at selected frequency ranges between 5 MHz and 100 MHz; however, tissue dielectric parameters and other measurement technical details remain unavailable. A KDB inquiry is required to determine the SAR measurement requirements on a case-by-case basis for individual circumstances.

3. RF Output Power

The tuned conducted Average Power (declared by client)

Mode	Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
Bluetooth	2402~2480MHz	8.2	+1	7.2	9.2
ZIGB(RF4CE)	2405~2480MHz	8.2	+1	7.2	9.2

The conducted power turn-up tolerance reference manufacturer specification.

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	9.18	≤30.00	PASS
		2440	8.99	≤30.00	PASS
		2480	9.12	≤30.00	PASS
BLE_2M	Ant1	2402	9.16	≤30.00	PASS
		2440	8.88	≤30.00	PASS
		2480	9.13	≤30.00	PASS
ZIGB(RF4CE)	Ant1	2405	7.40	≤30.00	PASS
		2450	7.23	≤30.00	PASS
		2480	8.01	≤30.00	PASS

Note: The relevant measured result has the offset with cable loss already.

4. Test Results

Mode	Maximum source-based time averaged conducted output power (dBm)	Maximum source-based time averaged conducted output power (mW)	Minimum separation distance (cm)	Limit for Exemption (mW)	Verdict
Bluetooth	9.2	8.31	0.5	23.81	Exempt from SAR/MPE
ZIGB(RF4CE)	9.2	8.31	0.5	23.81	Exempt from SAR/MPE

Note: The EUT not supported dual-frequency both transmission.

According to KDB 447498 D01 General RF Exposure Guidance v06 section 4.3.1 a), it can be concluded Limit for Exemption:

$$[E_{mw} \leq (7.5 * d_{mm}) / \sqrt{f_{GHz}}$$

$[E_{mw}$ is Max.power of channel, including tune-up tolerance. That is the maximum allowable limit.

d_{mm} is Min.test separation distance.

f_{GHz} is the RF channel transmit frequency in GHz.

7.5 for 10-g extremity SAR referred to as numeric thresholds.

Therefore this device complies with FCC's RF radiation exposure limits for general population without SAR evaluation.

_____ No Body Text Below _____

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3. The test report is invalid without the signatures of Author and Reviewer;
4. The test report is invalid if altered;
5. Objections to the test report must be submitted to CVC within 15 days;
6. Generally, commission test is responsible for the tested samples only;
7. As for the test result, “—” or “ N/A” means “not applicable”, “ / ”means “not testing”, “P” means “pass” and “F” means “fail”.

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