

RF Exposure Report

Report No.: WIR123580-ROKU_RF Exposure

FCC ID: TC2-R1039

Test Model: RC-MC1

Series Model: RC-MC5

Received Date: 12/23/2022

Test Date: 01/06/2023-01/20/2023

Issued Date: 01/20/2023

Applicant: Roku, Inc.

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Manufacturer: Roku, Inc.

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Release Control Record

Issue No.	Description	Date Issued
WIR123580-ROKU_RF Exposure	Original Release	01/20/2023

1 Certificate of Conformity

Product: WiFi Remote Control

Brand: Roku, Inc.

Test Model: RC-MC1

Series Model: RC-MC5

Sample Status: Engineering sample

Applicant: Roku, Inc.

Test Date: 01/06/2023-01/20/2023

Standards: FCC Part 2 (Section 2.1093)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

Christmas Martin

Christopher Martin
Test Engineer, Wireless Laboratory

Engineering Statement: The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made.

Gary Chou

Gary Chou
Wireless Engineering Manager, Wireless Laboratory

Revision	Report Date	Reason for Revision
Ø	January 20, 2023	Initial Issue.

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:

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

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

Mode	Frequency (MHz)	Max. Power (mW)	Tune-Up Tolerance	Min. test separation distance (mm)	SAR test exclusion calculation value	1-g SAR test exclusion thresholds	Result
5Ghz A Mode	5600	4.864	±1dB	5	2.892	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 chip antenna at with at 2.69dBi at 5150-5250 MHz, 4.3dBi at 5250-5700MHz, 3.9dBi at 5745-5825MHz
3. Calculate SAR test exclusion thresholds from condition "1" formulas.

4 Conclusion

The SAR evaluation is not required.

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