

RF Exposure Report

Report No.: FCC_RF_SL19040901-ROK-004_RF Exposure

FCC ID: TC2-R1028

Test Model: RC-EL1

Series Model: N/A

Received Date: 12/17/2019

Test Date: 12/30/2019/-01/28/2020

Issued Date: 01/29/2020

Applicant: Roku, Inc.

Address: 150 Winchester Circle, Los Gatos CA 95032

Manufacturer: Roku, Inc.

Address: 150 Winchester Circle, Los Gatos CA 95032

Issued By: Bureau Veritas Consumer Products Services, Inc.

Lab Address: 775 Montague Expressway, Milpitas, CA 95035

Test Location (1): 775 Montague Expressway, Milpitas, CA 95035

FCC Registration / Designation Number: 540430





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Report Format Version: 6.1.1



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Release Control Record

Issue No.	Description	Date Issued
FCC_RF_SL19040901-ROK-004_RF Exposure	Orignal Release	01/29/2020

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1 Certificate of Conformity

Product: WiFi Remote Control

Brand: Roku, Inc.

Test Model: RC-EL1

Series Model: N/A

Sample Status: Engineering sample

Applicant: Roku, Inc.

Test Date: 12/30/2019/-01/28/2020

Standards: FCC Part 2 (Section 2.1093)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

The above equipment has been tested by **Bureau Veritas Consumer Products Services**, **Inc.**, **Milpitas 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 EMC characteristics under the conditions specified in this report.

Prepared by : _	0	, Date:	01/29/2020	
	Deon Dai / Test Engineer			
Approved by:	α	, Date:	01/29/2020	
_	Chen Ge / Engineer Reviewer			

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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:

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

- ightharpoonup \Box f(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.</p>
- 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(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 \leq 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.

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3 SAR Test Exclusion Thresholds

Mode	Frequency (GHz)	Max. Power (dBm)	Max. Power (mW)	Tune-Up Tolerance	Min. test separation distance (mm)	SAR test exclusion calculation value ^{(NOTE} 2)	1-g SAR test exclusion thresholds	Result
2.4G WLAN	2412	8.80	7.59	±1dB	5	2.97	3	Pass
5G WLAN	5240	7.12	5.15	±1dB	5	2.97	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 with 2.9 dBi gain for 2.4G band, 2.8 dBi gain for UNII-1 Band and 4.4 dBi for UNII-3 Band.
- 3. Calculate SAR test exclusion thresholds from condition "1" formulas.

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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