

RF Exposure Report

Project Number: 5002314

Offer Number: SUW-202210003592

Report Number: 5002314EMC02

Revision Level: 0

Client: iKeyless, LLC

Equipment Under Test: Keyless Entry Remote Control

Model Number: HNHKL-G050

FCC ID: X32- HNHKG050

Applicable Standards: 47 CFR §§ 2.1093 (Portable)

FCC KDB 447498 D01 General RF Exposure Guidance v06

Report issued on: 02 February 2023

Result: Exempt from SAR evaluation



FOR THE SCOPE OF ACCREDITATION UNDER CERTIFICATE NUMBER: 3212.01

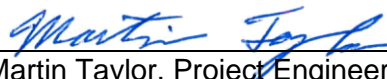
This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, or any agency of the Federal Government.

Prepared by:



Daniel Alvarez, Project Engineer

Reviewed by:



Martin Taylor, Project Engineer

Remarks: This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. And for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/terms-e-document.aspx>.

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for a maximum of 30 days only.

TABLE OF CONTENTS

1	GENERAL INFORMATION	3
1.1	CLIENT INFORMATION.....	3
1.2	TEST LABORATORY.....	3
1.3	GENERAL INFORMATION OF EUT.....	3
1.4	SEPARATION DISTANCE.....	3
2	SAR EXCLUSION CALCULATIONS	4
3	REVISION HISTORY	5

1 General Information

1.1 Client Information

Name: iKeyless LLC
Address: 12101 Sycamore Station Place, Suite 101
City, State, Zip, Country: Louisville, KY 40299

1.2 Test Laboratory

Name: SGS North America, Inc.
Address: 620 Old Peachtree Road NW, Suite 100
City, State, Zip, Country: Suwanee, GA 30024, USA

Accrediting Body: A2LA
Type of lab: Testing Laboratory
Certificate Number: 3212.01

1.3 General Information of EUT

Type of Product: Keyless Entry Remote Control
Model Number: HNHKL-G050
Firmware Version: HNHKL-F010
Sample ID: SUWEM2301000004
FCC ID: X32- HNHKG050

Frequency Range: 313.85 MHz
Modulation: FSK
Antenna: PCB trace loop (-5.6 dBi)*
Max Average EIRP: -28.4 dBm (derived from 66.8 dBuV/m max avg field strength at 3m)

Sample Received Date: 01 January 2023
Dates of testing: 24 January to 02 February 2023

**Data was not measured by SGS laboratory and therefore not responsible for accuracy. Data obtained via customer, specification sheet, previous regulatory filing or other.*

1.4 Separation Distance

The worst-case RF exposure occurs when a user places the remote control key in his or her pocket, such that there is close to no separation distance between the device and the user's body. A distance of 5mm is used if the distance is 5mm or less.

2 SAR Exclusion Calculations

The highest output power in conjunction with the transmit frequency has been used to demonstrate compliance.

The highest power level was obtained from the radio test report.

The EUT is considered a body application. Note that it can be held in the hand (extremity) as well, but the body application is the worst case for exclusion limits.

447498 D01 General RF Exposure Guidance v06

SAR test exclusion calculations

Section 4.3: General SAR test exclusion guidance / Section 4.3.1: Standalone SAR test exclusion considerations

	Input	Select Units	
Max Power:	-28.4	dBm	
Duty Cycle:	100.0%		<== Source based time average duty cycle
Min separation distance:	5	mm	
Frequency, f:	313.85	MHz	

Value reference Number	Values used for Calculation	Reference number definition
v1	0 mW	[max. power of channel, including tune-up tolerance, mW] 'Rounded to nearest mW
v2	5 mm	[min. test separation distance, mm] 'Rounded to nearest mm
v3	0.560	[f(GHz)]

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

Exclusion Calculation(1g):	0.0000	number	<== [v2 / v3] must be less than 3
Exclusion Calculation(10g):	0.0000	number	<== [v2 / v3] must be less than 7.5

Conclusions (Body):	The EUT max power is BELOW the threshold. SAR Testing is NOT required for Body applications
Conclusions (Extremity):	The EUT max power is BELOW the threshold. SAR Testing is NOT required for Extremity applications

3 Revision History

Revision Level	Description of changes	Revision Date
0	Initial Release	02 February 2023