

RF Exposure Report

Project Number: 4944213

Offer Number: SUW-202207003096

Report Number: 4944213EMC02

Revision Level: 0

Client: iKeyless, LLC

Equipment Under Test: Keyless Entry Remote Control

Model Number: 300-0271

FCC ID: X32-RHKFO

Applicable Standards: 47 CFR §§ 2.1093 (Portable)

FCC KDB 447498 D01 General RF Exposure Guidance v06

Report issued on: 10 March 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:



Martin Taylor, Project Engineer

Reviewed by:



Stephen Whalen, EMC Lab Manager

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
 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: 300-0271
 Firmware Version: SVN10965
 Sample ID: SUWEM2207000390
 FCC ID: X32-RHKFO

Frequency Range: 315 MHz
 Modulation: ASK
 Antenna: PCB trace loop (-5.6 dBi)*
 Max Average EIRP: -20.9 dBm (derived from 74.3 dBuV/m max avg field strength at 3m)

Sample Received Date: 29 July 2022
 Dates of testing: 12 August to 16 September 2022

**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:	-20.9	dBm	
Duty Cycle:	100.0%		← Source based time average duty cycle
Min separation distance:	5	mm	
Frequency, f:	315	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	0.561		[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:

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

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	10 March 2023