

FCC SAR Exclusion Report

Product name : Homey Bridge
Applicant : Athom B.V.
FCC ID : 2AVQ6HY0016

Test report No. : 200200216 FCC RF exposure Ver 1.0

Laboratory information

Accreditation

Telefication complies with the accreditation criteria for test laboratories as laid down in ISO/IEC 17025:2005. The accreditation covers the quality system of the laboratory as well as the specific activities as described in the authorized annex bearing the accreditation number L021 and is granted on 30 November 1990 by the Dutch Council For Accreditation (RvA: Raad voor Accreditatie).

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The Industry Canada registration number for the 3 meter test chamber of Telefication is: 4173A-1.

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Documentation

The test report must always be reproduced in full; reproduction of an excerpt only is subject to written approval of the testing laboratory. The documentation of the testing performed on the tested devices is archived for 10 years at Telefication Netherlands.

Testing Location

Test Site	Telefication BV
Test Site location	Edisonstraat 12a 6902 PK Zevenaar The Netherlands Tel. +31889983600 Fax. +31316583189

Revision History

Version	Date	Remarks	By
v1.00	09-06-2020	Release version	PvW

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1 General Description

1.1 Applicant

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Contact name:	Mr. Stefan Witkamp

1.2 Manufacturer

Client name:	Athom B.V.
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Zip code:	7521 BE
Telephone:	+31(0)639002706
E-mail:	legal@athom.com
Contact name:	Mr. Stefan Witkamp

1.3 Tested Equipment Under Test (EUT)

Product name:	HY0016 / HOMEY-BRIDGE-EU-01
Brand name:	Homey
FCC ID:	2AVQ6HY0016
IC ID:	25905-HY0016
Product type:	Smart Home Controller
Model(s):	Matte Black Shiny Black Black Logo White
Batch and/or serial No.	--
Software version:	4.0
Hardware version:	4.0
Date of receipt:	09-03-2020
Tests started:	09-03-2020
Testing ended:	29-04-2020

1.4 SAR Measurement Evaluation

1.4.1 Maximum Output Power

The maximum radiated power including tune-up tolerance is shown as below.

Mode	Maximum power level (dBm)
Bluetooth LE	9.3*
WLAN 802.11b	17.4*
Zigbee	8.5*
Zwave	3.28*

* from Telefication report 200200216 001 Ver 1.0.

1.4.2 SAR Testing Exclusions

According to KDB 447498 D01, the SAR test exclusion condition is based on source-based time-averaged maximum conducted output power, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions. The SAR exclusion threshold is determined by the following formula.

- For the test separation distance ≤ 50 mm

$$\frac{\text{Max. Tune up Power}_{(\text{mW})}}{\text{Min. Test Separation Distance}_{(\text{mm})}} \times \sqrt{f_{(\text{GHz})}} \leq 3.0$$

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

- For the test separation distance > 50 mm, and the frequency at 100 MHz to 1500 MHz

$$\left[(\text{Threshold at 50 mm in Step 1}) + (\text{Test Separation Distance} - 50 \text{ mm}) \times \left(\frac{f_{(\text{MHz})}}{150} \right) \right]_{(\text{mW})}$$

- For the test separation distance > 50 mm, and the frequency at > 1500 MHz to 6 GHz

$$[(\text{Threshold at 50 mm in Step 1}) + (\text{Test Separation Distance} - 50 \text{ mm}) \times 10]_{(\text{mW})}$$

Under normal use the separation distance is at least 200 mm between the antenna and the user.

Mode	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	Ant. to Surface (mm)	Calculated Limit (mW)	Require SAR Testing?
BLE	9.3	8.5	200	1500	No
WLAN 802.11b	17.4	55.0	200	1500	No
Zigbee	8.5	7.1	200	1500	No
Zwave	3.28	2.1	200	918	No

Note:

1. When separation distance ≤ 50 mm and the calculated result shown in above table is ≤ 3.0 , the SAR testing exclusion is applied.
2. When separation distance > 50 mm and the device output power is less than the calculated result (power threshold, mW) shown in above table, the SAR testing exclusion is applied.

1.5 Summary

Since the SAR testing for all device orientations apply SAR test exclusion per KDB 447498, SAR testing for this device is not required.