Allgon AB

MPE ASSESSMENT REPORT

Report Type:
FCC Part §2.1091 and §1.1307(b) assessment report

MODEL:
R33-01

REPORT NUMBER:
2507B1805SHA-002

ISSUE DATE:
August 26, 2025

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TEST REPORT

Report no.: 2507B1805SHA-002

Applicant:	Allgon AB
	August Barks gata 30A, SE-421 32 Västra Frölunda,Sweden
Manufacturer:	Allgon AB
	August Barks gata 30A, SE-421 32 Västra Frölunda,Sweden
FCC ID:	2BC3H2512A

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:
KDB447498 D01 General RF Exposure Guidance v06 FCC Part2.1091, FCC Part1.1307(b)

PREPARED BY:	**REVIEWED BY:**
Project Engineer Erick Liu	Reviewer Wakeyou Wang

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Revision History

Report No.	Version	Description	Issued Date
2507B1805SHA-002	Rev. 01	Initial issue of report	August 26, 2025

TEST REPORT

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Transceiver
Type/Model:	R33-01
Description of EUT:	EUT is a wireless transceiver, it has only one model.
Rating:	12-24VDC max150mA
Category of EUT:	Class B
EUT type:	☒ Table top ☐ Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	July 15, 2025
Date of test:	July 15, 2025 – August 26, 2025

1.2 Technical Specification

Frequency Range:	2405-2480MHz
Type of Modulation:	O-QPSK
Channel Number:	16
Channel Separation:	5MHz
Antenna Information:	Internal embedded antenna, 4.0dBi

Note: This information is supplied by the applicant. Any change in this value would result in different test data / conclusion.

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1.3 Description of Test Facility

Name:	Intertek Testing Services (Shanghai FTZ) Co., Ltd.
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L21189
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier: CN0014
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02

2 MPE Assessment

Test result: Pass

2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density S_{eq} (W/m^2)
0-1 Hz	-	$3,2 \times 10^4$	4×10^4	-
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	4 000/f	5 000/f	-
0,025-0,8 kHz	250/f	4/f	5/f	-
0,8-3 kHz	250/f	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	0,73/f	0,92/f	-
1-10 MHz	$87/f^{1/2}$	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375\ f^{1/2}$	$0,0037\ f^{1/2}$	$0,0046\ f^{1/2}$	f/200
2-300 GHz	61	0,16	0,20	10

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

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2.2 Assessment Results

Power density (S) is calculated according to the formula:
$S = PG / (4\pi R^2)$
Where S = power density in mW/cm^2
P = Radiated transmit power in mW
G = numeric gain of transmit antenna
R = distance (cm)

As we can see from the test report 2507B1805SHA-001:

The calculations in the table below use the highest gain of antenna for client EUT. These calculations represent worst case in terms of the exposure levels.

Frequency band	Power		Antenna Gain	R	S	Limits
(MHz)	dBm	mW	dBi	(cm)	(mW/cm^2)	(mW/cm^2)
2400 – 2483.5	7.55	5.69	4.0	20	0.0028	1

The worst MPE = 0.0028 mW/cm2 < 1 mW/cm2.

Note: 1 mW/cm2 from 1.310 Table 1.

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Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.
To ensure compliance, operations at closer than this distance is not recommended.

**********END**********