Test report No.: 2430518R-RFUSV17S-A

RF Exposure Report

Product Name	Radio-Navigation-System
Trademark	Bosch
Model and /or type reference	AIVI2SBXM
FCC ID	2AUXS-AIVI2SBXM
Applicant´s name / address	Robert Bosch GmbH Robert Bosch-Str. 200 31139 Hildesheim, Germany
Manufacturer´s name	Robert Bosch GmbH
Test method requested, standard	KDB 447498 D01 v06 ☒ Minimum test separation distance ≥ 20 cm ☐ For low power devices
Verdict Summary	IN COMPLIANCE
Documented By (Senior Project Specialist / Genie Chang)	Genie Chang
Tested By (Principle RF Engineer / Alan Chen)	Alan Chen
Approved By (Senior Manager / Tim Sung)	Tim Sung
Date of Receipt	2024/03/18
Date of Issue	2024/10/17
Report Version	V1.0

Competences and Guarantees

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

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5. Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Revision History

Report No.	Version	Description	Issued Date
2430518R-RFUSV17S-A	V1.0	Initial issue of report.	2024/10/17

1. General Information

1.1. EUT Description

Product Name	Radio-Navigation-System
Trademark	Bosch
Model and /or type reference	AIVI2SBXM

Note: For more detailed information please refer to report No.: 2430518R-RFNAV03S-3 and 2430518R-RFNAV03S-4.

2. Test Facility

USA	FCC Designation Number: TW0033
Canada	CAB Identifier Number: TW3023 / Company Number: 26930

Site Description	Accredited by TAF
	Accredited Number: 3023

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
	Linkou Laboratory
Address	No. 5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan, R.O.C.
Performed Location	No. 26, Huaya 1st Rd., Guishan Dist.,Taoyuan City 333411, Taiwan, R.O.C.
Phone Number	+886-3-275-7255
Fax Number	+886-3-327-8031

3. RF Exposure Evaluation

3.1. Standard Applicable

According to KDB 447498 D01 (7.1), A minimum test separation distance ≥ 20 cm is required between the antenna and radiating structures of the device and nearby persons to apply mobile device exposure limits.

3.2. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/ Uncontrolled Exposures				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $Pd = (Pout*G)/(4*pi*r^2)$

Where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0

3.3. Test Result of RF Exposure Evaluation

Product	Radio-Navigation-System
Test Item	RF Exposure Evaluation

Band	conducted output power (dBm)	Antenna Gain (dBi)	E.I.R.P (dBm)	E.I.R.P (mW)	Power Density at R = 20 cm (mW/cm2)	Limit (mW/cm2)
2.4 GHz WLAN	13.93	2.84	16.770	47.534	0.009	1
5 GHz (U-NII-1)	9.80	2.28	12.080	16.144	0.003	1
5 GHz (U-NII-2A)	9.97	1.75	11.720	14.859	0.003	1
5 GHz (U-NII-2C)	9.93	2.18	12.110	16.255	0.003	1
5 GHz (U-NII-3)	9.95	0.12	10.070	10.162	0.002	1

Note: The conducted output power is refer to report No.: 2430518R-RFNAV03S-3 and 2430518R-RFNAV03S-4 from the DEKRA.

Results	PASS