



SAR Exemption Evaluation Report

Product Name : 2620011024000

Model No. : 2620011024000

FCC ID : R7T2001102

Applicant : Würth Elektronik eiSos GmbH & Co. KG

Address : Max-Eyth-Str. 1 · 74638 Waldenburg,
Germany

Date of Receipt : Jan. 11, 2019

Issued Date : Aug. 23, 2024

Report No. : 2470363R-RF-US-P20V02

Report Version : V1.0

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

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Test Report Certification

Issued Date : Aug. 23, 2024

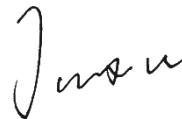
Report No. : 2470363R-RF-US-P20V02



Product Name : 2620011024000
Applicant : Würth Elektronik eiSos GmbH & Co. KG
Address : Max-Eyth-Str. 1 · 74638 Waldenburg, Germany
Manufacturer : Würth Elektronik eiSos GmbH & Co. KG
Address : Max-Eyth-Str. 1 · 74638 Waldenburg, Germany
Factory : Würth Elektronik eiSos GmbH & Co. KG
Address : Max-Eyth-Str. 1 · 74638 Waldenburg, Germany
Model No. : 2620011024000
Trade name : 

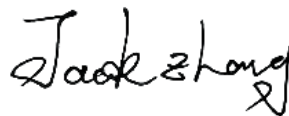
FCC ID : R7T2001102
EUT Voltage : 1,71-3,3Vdc
Test Voltage : 3.0 Vdc
Applicable Standard : FCC Part 2.1093
Test Result : Complied
Performed Location : DEKRA Testing & Certification (Suzhou) Co., Ltd.
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou,
215006, Jiangsu, China
TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098
FCC Designation Number: CN1199

Tested By :



(Project Engineer : Jun Xu)

Approved By :



(Manager : Jack Zhang)

1. RF Exposure Evaluation

1.1. Limits: KDB 447498 D04

B.2 Blanket 1 mW Blanket Exemption

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

The 1 mW blanket exemption applies at separation distances less than 0.5 cm, including where

there is no separation. This exemption shall not be used in conjunction with other exemption criteria other than those for multiple RF sources in paragraph § 1.1307(b)(3)(ii)(A).

The 1 mW exemption is independent of service type and covers the full range of 100 kHz to 100 GHz, but it shall not be used in conjunction with other exemption criteria or in devices with

higher-power transmitters operating in the same time-averaging period. Exposure from such higher-power transmitters would invalidate the underlying assumption that exposure from the lower-power transmitter is the only contributor to SAR in the relevant volume of tissue.

B.4 SAR-based Exemption

SAR-based thresholds are derived based on frequency, power, and separation distance of the RF

source. The formula defines the thresholds in general for either available maximum time-averaged power or maximum time-averaged ERP, whichever is greater.

If the ERP of a device is not easily determined, such as for a portable device with a small form

factor, the applicant may use the available maximum time-averaged power exclusively if the device antenna or radiating structure does not exceed an electrical length of $\lambda/4$.

As for devices with antennas of length greater than $\lambda/4$ where the gain is not well defined, but always less than that of a half-wave dipole (length $\lambda/2$), the available maximum time-averaged

power generated by the device may be used in place of the maximum time-averaged ERP, where

that value is not known.

The separation distance is the smallest distance from any part of the antenna or radiating structure for all persons, during operation at the applicable ERP. In the case of mobile or portable devices, the separation distance is from the outer housing of the device where it is closest to the antenna.

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged

power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies

from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula (B.2).

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}}(d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B.2})$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

The example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
		5	10	15	20	25	30	35	40	45	50
	300	39	65	88	110	129	148	166	184	201	217
	450	22	44	67	89	112	135	158	180	203	226
	835	9	25	44	66	90	116	145	175	207	240
	1900	3	12	26	44	66	92	122	157	195	236
	2450	3	10	22	38	59	83	111	143	179	219
	3600	2	8	18	32	49	71	96	125	158	195
	5800	1	6	14	25	40	58	80	106	136	169

1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18°C and 78% RH.

1.3. Test Result of RF Exposure Evaluation

Product	:	2620011024000
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

● Antenna Information

Antenna manufacturer	N/A					
Antenna Delivery	☒	1*TX+1*RX	☐	2*TX+2*RX	☐	3*TX+3*RX
Antenna technology	☒	SISO				
	☐	MIMO	☐	Basic		
			☐	CDD		
			☐	Beam-forming		
Antenna Type	☐	External	☐	Dipole		
	☒	Internal	☐	PIFA		
			☒	PCB		
			☐	Ceramic Chip Antenna		
			☐	Stamping Antenna		
			☐	Metal plate type F antenna		
			☐	Monopole antenna		
	Antenna Gain	-0.5dBi				

1.4. Test Result of RF Exposure Evaluation

B.2 Blanket 1 mW Blanket Exemption

Test Mode	Frequency Band (MHz)	Maximum conducted Power (dBm)	Maximum ERP Power (dBm)	Maximum Power (mW)	R (mm)	Limit (mW)	Result
BT	2402 ~ 2480	4.41	2.21	2.76	5.0	1	Not applicable

Note: BT does not comply with B.2 Blanket 1 mW Blanket Exemption, we use B.4 SAR-based Exemption for evaluation.

B.4 SAR-based Exemption

Test Mode	Frequency Band (MHz)	Maximum conducted Power (dBm)	Maximum ERP Power (dBm)	Maximum Power (mW)	Distance (mm)	Limit (mW)	Result
BT	2402 ~ 2480	4.41	1.76	2.76	5.0	3.0	SAR was not required.

Note: This report is based on FCC ID: WAP3043, The customer changes the Applicant, Manufacturer, Factory, Product Name, Product Model and other information. At the same time, we update the standard KDB 447498 D01V06 to KDB 447498 D04. No additional testing is required after technical evaluation.

_____ The End _____