

MPE / SAR exemption letter according to Interim procedure KDB 447498 D04

Customer	Product	Model	Type	HW version	SW version
Kadex B.V.	Gateway	Primary Locator	Art. No. 210307915	V6.01	EFR32 (915 MHz): 07.16 BLE: 01.27

FCC ID

2BOAU-PL601

Contains FCC ID: 2AAQS-ISP1507

Minimum Distance

"Typical operational positions: Fixed installation, wall or ceiling mounted" according to external customer's document "Primary_locator_operational_description_tune_up_1.3".

Therefore, a minimum distance of ≥ 20 cm from the human body is assumed.

In addition, the minimum distance from the human body is 20 cm, according to the external customer's document "Primary_locator_manual_1.4".

The customer thus declares that the device is not body-worn.

RF Exposure Test Exemptions for Single Source

MPE-based Exemption

According 1.1307(b)(3)(i)(C) Option C – ERP at frequencies above 300 kHz but at distances $R > \lambda/2\pi$ can be exempted as follows:

TABLE B.1—THRESHOLDS FOR SINGLE RF SOURCES
SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION

RF Source Frequency			Minimum Distance			Threshold ERP
f_L MHz		f_H MHz	$\lambda_L / 2\pi$		$\lambda_H / 2\pi$	W
0.3	–	1.34	159 m	–	35.6 m	$1,920 R^2$
1.34	–	30	35.6 m	–	1.6 m	$3,450 R^2/f^2$
30	–	300	1.6 m	–	159 mm	$3.83 R^2$
300	–	1,500	159 mm	–	31.8 mm	$0.0128 R^2 f$
1,500	–	100,000	31.8 mm	–	0.5 mm	$19.2 R^2$
Subscripts L and H are low and high; λ is wavelength. From § 1.1307(b)(3)(i)(C), modified by adding Minimum Distance columns.						

SAR-based Exemption

According 1.1307(b)(3)(i)(B) Option B – Available maximum time-averaged power or effective radiated power (ERP) at frequencies above 300 kHz and below 6 GHz, but with distances from 0.5 cm to 40 cm may be exempted as follows:

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

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

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where

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

Table B.2—Example Power Thresholds (mW)

	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

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Calculation based on external document "Primary_locator_operational_description_tune_up_1.3" provided by customer.

Bluetooth

SAR-based Exemption

Exemption acc. Formula of § 1.1307(b)(3)(i)(B)—SINGLE RF SOURCES SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION															
Band	Technology	Frequency	R	R ≥ 0.5 cm and R ≤ 40 cm fulfilled	Maximum Rated Conducted Output Power	Maximum Tolerance	Minimum Path Loss to Antenna	Maximum Antenna Gain	Duty Cycle	EIRP	ERP	ERP	Threshold ERP	MPE Exemption fulfilled	Ratio of Value/Limit
		(MHz)	(m)		(dBm)	(dB)	(dB)	(dBi)	(%)	(dBm)	(dBm)	(mW)	(mW)		
2.4 GHz	Bluetooth	2400.0	0.200	yes	4.0	0.0	0.0	0.6	100.0	4.6	2.5	1.758	3060.000	yes	0.000574
		2442.0	0.200	yes						4.6	2.5	1.758	3060.000	yes	0.000574
		2483.5	0.200	yes						4.6	2.5	1.758	3060.000	yes	0.000574

proprietary (915 MHz)

SAR-based Exemption

Exemption acc. Formula of § 1.1307(b)(3)(i)(B)—SINGLE RF SOURCES SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION															
Band	Technology	Frequency	R	R ≥ 0.5 cm and R ≤ 40 cm fulfilled	Maximum Rated Conducted Output Power	Maximum Tolerance	Minimum Path Loss to Antenna	Maximum Antenna Gain	Duty Cycle	EIRP	ERP	ERP	Threshold ERP	MPE Exemption fulfilled	Ratio of Value/Limit
		(MHz)	(m)		(dBm)	(dB)	(dB)	(dBi)	(%)	(dBm)	(dBm)	(mW)	(mW)		
915 MHz	proprietary	902.0	0.200	yes	20.0	0.0	0.0	3.6	100.0	23.6	21.5	139.637	1840.080	yes	0.075886
		915.0	0.200	yes						23.6	21.5	139.637	1866.600	yes	0.074808
		928.0	0.200	yes						23.6	21.5	139.637	1893.120	yes	0.073760

Simultaneous Transmission

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

	Bluetooth	proprietary
Maximum Value	0.000574	0.075886
Total Value	=	0.076461

Conclusion

MPE / SAR Based Exemption fulfilled

The current version of Test Report 1-9816-25-01-06_TR1-R02 replaces the test report 1-9816-25-01-06_TR1-R01 dated 2026-May-29. The replaced test report is herewith invalid.



 Salih Öztan

Authorization of test report



 Martin Nunier

Responsible of test report

Version	Applied changes	Date of release
R01	Initial release	2026-May-29
R02	"In addition, the minimum distance from the human body is 20 cm, according to the external customer's document "Primary_locator_manual_1.4"." added on page 1	2026-Jun-02

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