

MPE exemption letter according Interim procedure KDB 447498 D04

Customer	Product	Model	Type	HW Status	SW status	FCC ID
Brose Fahrzeugteile SE & Co. Kommanditgesellschaft, Bamberg Berliner Ring 1 96052, Bamberg Germany	Kick Sensor (HfA)	R-HFA GEN1	AWR1843	G45476-080	C0_SWR5_2	2AHV8-G45476

Declared minimum distance to human body according to customer ≥ 20 cm customer information

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

RF Exposure Test Exemptions for Single Source

According 1.1307(b)(3)(i)(C) Option C – ERP 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.

Calculation based on external document “Operational_Description_tech_details” provided by customer and TR20-1-0018210T001a.

Exemption acc. TABLE 1 TO § 1.1307(b)(3)(i)(C)—SINGLE RF SOURCES SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION												
Band	Technology	Frequency (MHz)	$\lambda/2\pi$ (m)	R (m)	R $\geq \lambda/2\pi$ fulfilled	Threshold ERP (W)	Cond. PWR incl. Tolerance (dBm)	Maximum Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (W)	MPE Exemption fulfilled
77 GHz - 79 GHz	FMCW Radar	77000,0	0,000	0,200	yes	0,768	10,5	9,4	19,9	17,7	0,059	yes
		78000,0	0,000	0,200	yes	0,768	10,5	9,4	19,9	17,7	0,059	yes
		79000,0	0,000	0,200	yes	0,768	10,5	9,4	19,9	17,7	0,059	yes

Simultaneous Transmission

The customer declares that the device is not able to transmit simultaneously.

Conclusion: MPE-Based Exemption fulfilled

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Version	Applied changes	Date of release
--	Initial release	2023-Mar-14
C01	Updated based on latest customer inputs.	2023-Mar-23
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