

MPE exemption letter 23-1-0069401T002a

MPE exemption letter according Interim procedure KDB 447498 D04

Customer	Product	Model	Type	HW Status	SW status	FCC ID
Dryad Networks GmbH Eisenbahnstr. 37 16225 Eberswalde Germany	Wildfire Sensor	WILDFIR-14	SILVANET WILDFIRE SENSOR	WILDFIR-14	1.5.0	2BAH4WILDFIR-14

Declared minimum distance to human body according to customer ≥ 100 cm according customer's document "MPE Information Requirements_v2".

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	19.2R 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 "MPE Information Requirements_v2" provided by customer.

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Standalone Transmission

Exemption acc. TABLE 1 TO § 1.1307(b)(3)(i)(C)—SINGLE RF SOURCES SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION																
Band	Technology	Frequency (MHz)	A/2π (m)	R (m)	R ≥ A/2π fulfilled	Maximum Rated Conducted Output Power (dBm)	Maximum Tolerance (dBm)	Minimum Path Loss to Antenna connector (dB)	Minimum Path Loss in Antenna cable (dB)	Maximum Antenna Gain (dBi)	Duty cycle (%)	ERP (dBm)	ERP (dBm)	ERP (W)	Threshold ERP (W)	MPE Exemption fulfilled
902 MHz to 928 MHz	LoRa	902.3	0.053	1.000	yes	14.0	1.5	0.0	0.0	2.4	100.0	17.9	15.8	0.038	11.549	yes
		914.9	0.052	1.000	yes					2.5		18.0	15.9	0.038	11.711	yes
		927.5	0.051	1.000	yes					2.6		18.1	16.0	0.039	11.872	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-Aug-18