

STATEMENT ON EXPOSURE TO ELECTROMAGNETIC FIELDS

EQUIPMENT

Type of equipment:	VaiNet Wireless Humidity and Temperature Data Logger
Brand name:	VAISALA
Type / Model:	RFL100
Manufacturer:	Vaisala Oyj
By request of:	Vaisala Oyj

REQUIREMENT

47 CFR §1.1310
KDB KDB 447498 D01
RSS-102 Issue 5
ARPANSA radiation protection series 3

CALCULATIONS

The maximum EIRP is $11.4 \text{ dBm} + 1 \text{ dBi} = 12.4 \text{ dBm} = 17.4 \text{ mW}$

Worst case power flux density calculation is as follows:

$$S = \frac{dc \times EIRP}{4 \times \pi \times r^2}$$

dc=1
r=20 cm

$$S = 1 \times 17.4 / (4 \times \pi \times 20^2) = 0.0035 \text{ mW/cm}^2$$

LIMITS & EVALUATIONS:

RSS-102 exemption limits for routine Evaluation

At or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz;
At 921.65 MHz frequency limit is 1.39 W

CFR 47 §1.131 table 1 limits for general poulation

Power density limit (mW/cm²) at or above 300 MHz and below 1500 MHz is $f(\text{MHz})/1500$
At 921.65 MHz frequency limit is 0.6137 mW/cm²

ARPANSA Radiation protection series 3 Table 7 General public

Power density limit (mW/cm²) at or above 400 MHz and below 2000 MHz is $f(\text{MHz})/200$
At 921.65 MHz frequency limit is 4.6 W/m²

Standard	Reference for limit	Limit	Unit	Values	Result
CFR 47 §1.1310	Table1	0.6137	mW/cm ²	0.0035	PASS
RSS-102 issue 5 (2015)	RSS-102 issue 5 chapter 2.5.2	1.39	W	0.017	PASS
ARPANSA RPS3	Table 7	4.6	W/ m ²	0.035	PASS

The EUT complies with limits without testing

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