



BNetzA-CAB-02/21-102



RF Exposure Evaluation according to KDB 447498 D01 v06

Report identification number: 1-7043_23-01-10_TR1-R03_MPE_FCC

Certification numbers and labeling requirements	
FCC ID	2ANX3-ECO01

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1. MPE at given distance (KDB 447498 D01 General RF Exposure Guidance v06)

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4\pi R^2$$

where: S = Power density
P = Power input to the antenna
G = Antenna gain
R = Distance to the center of radiation of the antenna
PG = Output Power including antenna gain

The table below is excerpted from Table 1B of 47 CFR 1.1310 titled "Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure"

Frequency Range (MHz)	Power Density (mW/cm ²)	Averaging Time (minutes)
300 -1500	f/1500	30
1500 - 100000	1.0	30

where f = Frequency (MHz)

2. EUT technologies

Declared minimum safety distance: **20 cm**

SRD Technology	Frequency [MHz]		Reference #	Output Power [dBm]			Power Density [mW/cm ²]		Share of Limit %
	f _{Min}	f _{Max}		P _{ERP}	P _{EIRP}	P _{RF Exp}	S _{Result}	S _{Limit}	
LoRa	902	928	A	N/A	16.4	16.4	0.0087	0.60	1.44%

Referenced Documents:

#	Results from:
A	Customer Questionnaire

3. Conclusion

This prediction demonstrates the following:

The power density levels for FCC at a distance of 20 cm are below the maximum levels allowed by regulations.

Conclusion: RF exposure evaluation is not required.