

BNetzA-CAB-02/21-102



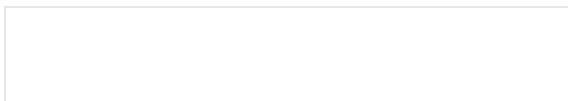
## RF Exposure Evaluation according to KDB 447498 D01 v06

Report identification number: 1-5761/23-01-08

Certification numbers and labeling requirements	
FCC ID	VW3VSB3918

This test report is electronically signed and valid without handwritten signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

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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 <sup>2</sup> )	Averaging Time (minutes)
300 -1500	f/1500	30
1500 - 100000	1.0	30

where f = Frequency (MHz)

## 2. EUT technologies

Declared minimum safety distance: **30 cm**

SRD Technology	Frequency [MHz]		Reference #	Output Power [dBm]			Power Density [mW/cm <sup>2</sup> ]		Share of Limit %
	f <sub>Min</sub>	f <sub>Max</sub>		P <sub>ERP</sub>	P <sub>EIRP</sub>	P <sub>RF Exp</sub>	S <sub>Result</sub>	S <sub>Limit</sub>	
Bluetooth	2402	2480	A	N/A	9.2	<b>9.2</b>	0.001	1.000	<b>0.07%</b>
Bluetooth LE	2402	2480	B	N/A	9.0	<b>9.0</b>	0.001	1.000	<b>0.07%</b>
WLAN 2.4 GHz	2412	2462	C	N/A	33.9	<b>33.9</b>	0.215	1.000	<b>21.46%</b>
WLAN U-NII-1	5180	5240	D	N/A	28.5	<b>28.5</b>	0.063	1.000	<b>6.26%</b>
WLAN U-NII-2A	5260	5320	D	N/A	28.6	<b>28.6</b>	0.064	1.000	<b>6.41%</b>
WLAN U-NII-2C	5500	5700	D	N/A	29.9	<b>29.9</b>	0.086	1.000	<b>8.64%</b>
WLAN U-NII-3	5745	5825	D	N/A	33.9	<b>33.9</b>	0.217	1.000	<b>21.70%</b>

Note:

- EIRP Output Power [dBm] = Conducted Output Power [dBm] + Antenna Gain (dBi)
- Worst case of WLAN 5 GHz is marked green.

Referenced Documents:

#	Results from:
A	Test Report 1-5761/23-01-02
B	Test Report 1-5761/23-01-03
C	Test Report 1-5761/23-01-04
D	Test Report 1-5761/23-01-05

### 3. Collocation overview:

Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is  $\leq 1.0$ , according to calculated/estimated, numerically modeled, or measured field strengths or power density.

Technology	Share of Limit [%]
Bluetooth	0.07%
Bluetooth LE	0.07%
WLAN 2.4 GHz	21.46%
WLAN U-NII-3	21.70%
Sum	<b>43.30%</b>

### 4. Conclusion

This prediction demonstrates the following:

The power density levels for FCC at a distance of 30 cm are below the maximum levels allowed by regulations.

**Conclusion:** RF exposure evaluation is not required.