



BNetzA-CAB-02/21-102



Deutsche  
Akkreditierungsstelle  
D-PL-12076-01-04

# RF Exposure Evaluation according to KDB 447498 D01 v06

**Report identification number: 1-3547/21-01-10\_ MPE\_FCC**

Certification numbers and labeling requirements	
FCC ID	MCQ-CCIMX28N

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.

### Document authorised:



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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: **20 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 Classic	2402	2480	A	N/A	11.1	11.1	0.00	1.00	0.26%
Bluetooth LE	2402	2480	B	N/A	4.3	4.3	0.00	1.00	0.05%
WLAN 2.4 GHz	2412	2462	C	N/A		0.0	0.00	1.00	0.02%
WLAN 5 GHz	5180	5240	D	N/A	16.3	16.3	0.01	1.00	0.85%
WLAN 5 GHz	5260	5320	D	N/A	17.6	17.6	0.01	1.00	1.14%
WLAN 5 GHz	5500	5700	D	N/A	15.3	15.3	0.01	1.00	0.67%
WLAN 5 GHz	5745	5825	D	N/A	15.4	15.4	0.01	1.00	0.69%

Referenced Documents:

#	Results from:
A	Test Report 1-3547_21-01-12-A
B	Test Report 1-3547_21-01-13-A
C	Test Report 1-3547_21-01-14-A
D	Test Report 1-3547_21-01-15-A

### 3. Collocation overview:

Technology	Share of Limit [%]
Bluetooth Classic/LE	0.26%
WLAN 2.4 GHz/5 GHz	1.14%
Sum	<b>1.40%</b>

### 4. 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.