



Maximum Permissible Exposure (MPE) & Exposure evaluation

Report identification number: 1-4095/22-01-01-A MPE (FCC)

Certification numbers and labeling requirements	
FCC ID	VW3DIW377

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Document authorised:

p.o. 
cn=Michael Dorongovski, o=CTC
advanced GmbH, ou=DOR-210422,
email=Michael.Dorongovski@ctcadvance
d.com, c=DE
2022.09.05 11:44:46 +02'00'

Thomas Vogler
Lab Manager
Radio Communications & EMC


cn=Marco Scigliano, o=CTC advanced
GmbH, ou=SCI-211118,
email=marco.scigliano@ctcadvanced.
com, c=DE
2022.09.05 10:42:48 +02'00'

Marco Scigliano
Testing Manager
Radio Communications & EMC

EUT technologies:

Technologies:	Power Average Conducted [dBm]			Power EIRP ² [dBm]	Max. Power for RF Exposure [dBm]	Data taken from (#)
	Measured Value	Max. declared (Tune-Up)	Difference ¹ (Tune-Up Correction)			
BT Classic 2450 MHz	3.9	N/A	N/A	5.0 ¹	5.0 ¹	1-4095/22-01-03-B
BT LE 2450 MHz	2.7	N/A	N/A	4.8 ¹	4.8 ¹	1-4095/22-01-02-B
WLAN 2450 MHz 2x2 MIMO	21.3	N/A	N/A	23.5 ¹	23.5 ¹	1-4095/22-01-04-A
WLAN 5000 MHz 2x2 MIMO	27.6	N/A	N/A	29.9 ²	29.9 ²	1-4095/22-01-05-A

¹ Peak Antenna Gain of 2.1 dBi added² Peak Antenna Gain of 2.3 (worst case) added

Declared minimum safety distances: 30cm
Collocation overview:

Technology \ Active scenario:	1
BT LE / BT Classic	x
WLAN 2.4 GHz	x
WLAN 5 GHz	x

Prediction of MPE limit 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)

Prediction: worst case

Technologies:		BLE	WLAN 2.4	WLAN 5	
	Frequency (MHz)	2450	2450	5000	
PG	Declared max power (EIRP)	5.0	23.5	29.9	dBm
R	Distance	30.0	30.0	30.0	cm
S	MPE limit for uncontrolled exposure	1.0000	1.0000	1.0000	mW/cm ²
	Calculated Power density:	0.0003	0.0198	0.0865	mW/cm ²
	Calculated percentage of Limit:	0.03%	1.98%	8.65%	
Collocation:					
	BT + WLAN 2.4 GHz + WLAN 5 GHz	10.65%			
	Calculated percentage of Limit:				

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.