



RF Exposure Evaluation according to KDB 447498 D01 v06

Report identification number: 1-7077_23-01-07_TR1-R01_MPE_FCC

Certification numbers and labeling requirements	
FCC ID	VW3DCIW377D

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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}	
Bluetooth Classic	2402	2480	C	N/A	6.0	6.0	0.001	1.00	0.08%
Bluetooth LE	2402	2480	D	N/A	7.0	7.0	0.001	1.00	0.10%
WLAN 2.4 GHz	2412	2462	A	N/A	27.0	27.0	0.100	1.00	9.97%
WLAN 5 GHz	5180	5240	B	N/A	27.0	27.0	0.100	1.00	9.97%
WLAN 5 GHz	5260	5320	B	N/A	26.0	26.0	0.079	1.00	7.92%
WLAN 5 GHz	5500	5700	B	N/A	26.0	26.0	0.079	1.00	7.92%
WLAN 5 GHz	5745	5825	B	N/A	28.0	28.0	0.126	1.00	12.55%

Notes:

- Max rated conducted output power taken from customer's tune up info

Referenced Documents:

#	Results from:
A	Test Report 1-7077_23-01-04_TR1_R1
B	Test Report 1-7077_23-01-05_TR1_R1
C	Test Report 1-7077_23-01-02_TR1-R1
D	Test Report 1-7077_23-01-03_TR1-R1

3. Collocation overview:

Technology	Share of Limit [%]
Bluetooth Classic	0.08%
Bluetooth LE	0.10%
WLAN 2.4 GHz	9.97%
WLAN 5 GHz	12.55%
Sum	22.70%

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.