



Maximum Permissible Exposure (MPE) & Exposure evaluation

Report identification number: 1-1863/16-01-05

Certification numbers and labeling requirements	
FCC ID	QZ9-CC9048

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Document authorized:

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EUT technologies:

Technologies:	Max. power conducted: (AVG)	Max. EIRP:	Min. pathloss:
Bluetooth classic	Declared: 4 dBm	Measured: 10 dBm	0 dB (if applicable)

Note:

Bluetooth classic test results and antenna gain see CETECOM test report 1-1863/16-01-02

Prediction of MPE limit at given distance - FCC

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

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

		> 1500 MHz
	Technology	BT @ 2450 MHz
P	Max power input to the antenna	4 dBm
R	Distance	20 cm
G	Antenna gain	6 dBi
S	MPE limit for uncontrolled exposure	1 mW/cm ²
	Calculated Power density:	0.0020 mW/cm ²

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.