FCC ID: XK5-BMPSR
IC: 5158A-BMPSR
Model: Bluetooth 4.0 Dual Mode Module

CETECOM™

Prediction of MPE limit at given distance

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:
P	Max power input to the antenna:	8.5 dBm / 7.08 mW
R	Distance:	20 cm
S	MPE limit for uncontrolled exposure:	1 mW/cm^2
G	Antenna gain:	2.6 numerical

Calculated Power density: **0.004 mW/cm^2**

This prediction demonstrates the following:

The power density levels at a distance of 20 cm are below the maximum levels allowed by regulations.

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