

MPE Calculations

The device is not a portable device (i.e. intended to be worn on the body or be hand-held), so it is classified as being either a mobile device or a fixed mounted device. The user's manual specifies a minimum separation distance of at least 20cm, consistent with this classification.

FCC part 1.1310, Table 1 limits the power density for uncontrolled exposure. The power density, P_d (mW/cm^2) calculated from the maximum EIRP, P_t (mW) and the distance, d (m), between the transmitting antenna and the closest person, can be calculated using:

$$P_d = P_t / (4 \pi d^2)$$

Frequency	MPE Limit (mW/cm^2)	Output Power (mW)	Max. Antenna Gain (dBi)	EIRP (mW)	P_d at 20cm (mW/cm^2)	Distance where P_d = limit (cm)
2402 to 2480 MHz	1.00	2.5	4.1	6.5	0.001	0.7

At 20cm from the device the contribution from the Bluetooth device is well below the limit.

Note that as the device is below the $60/f(\text{GHz})$ threshold power of 25mW for a 2.4 GHz device, it is not restricted to mobile use but could be classified as a portable device when no other transceivers are installed in the base device.