RF Exposure Evaluation

The EUT is a wireless device operating in the ISM 2.4 GHz band used in a mobile application, e.g. at least 20 cm from any body part of the user or nearby persons. The device doesn't transmit simultaneously in that band. So, the calculation of RF exposure (Power Density) is made in standalone configuration.

The Power Density is calculated using formula:

$$S = \frac{EIRP}{4\pi D^2}$$

Where: S is Power Density in mW/cm^2
        D is the distance from the antenna in meters.

The maximum conducted (average) Power is 19 mW, maximum antenna gain 4 dBi or 2.5 numeric.
EIRP is calculated as $19 \times 2.5 = 47.5$ mW.

At *D* =20 cm, **S = 0.009 mW/cm^2**

For General Population/Uncontrolled Exposure, the MPE Limit in 2.4 GHz band according to the Table 1 in sec 1.1310 of the FCC Rules is **1 mW/cm^2** .
So, the Power Density S is below the MPE Limit.