MPE Calculation Method

Predication of MPE limit at a given distance
Equation from page 19 of OET Bulletin 65, Edition 97-01

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

where:

S = power density (in appropriate units, e.g. mW/cm^2)
EIRP = equivalent (or effective) isotropically radiated power (in appropriate units, e.g., mW)
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

As declared by the Applicant, the EUT is a wireless device used in a fix application, at least 20 cm from any body part of the user or nearby persons; from the maximum EUT RF output power, the minimum separation distance, r =20cm, as well as the gain of the used antenna is 2dBi, the RF power density can be obtained. So, the worst result is below:

Max Output Power = <u>15.83</u> dBm, Ant gain <u>2.0</u>dBi
EIRP=PG= (15.83+2.0) dBm=17.83 dBm=10$^{(17.83/10)}$ mW=<u>60.67</u>mW

So, $S = \frac{EIRP}{4\pi R^2} = \frac{60.67}{4\pi \times 20^2} = \underline{0.012}$mW/cm^2 **<1.0 mW/cm^2**

Conclusion: **Pass**.